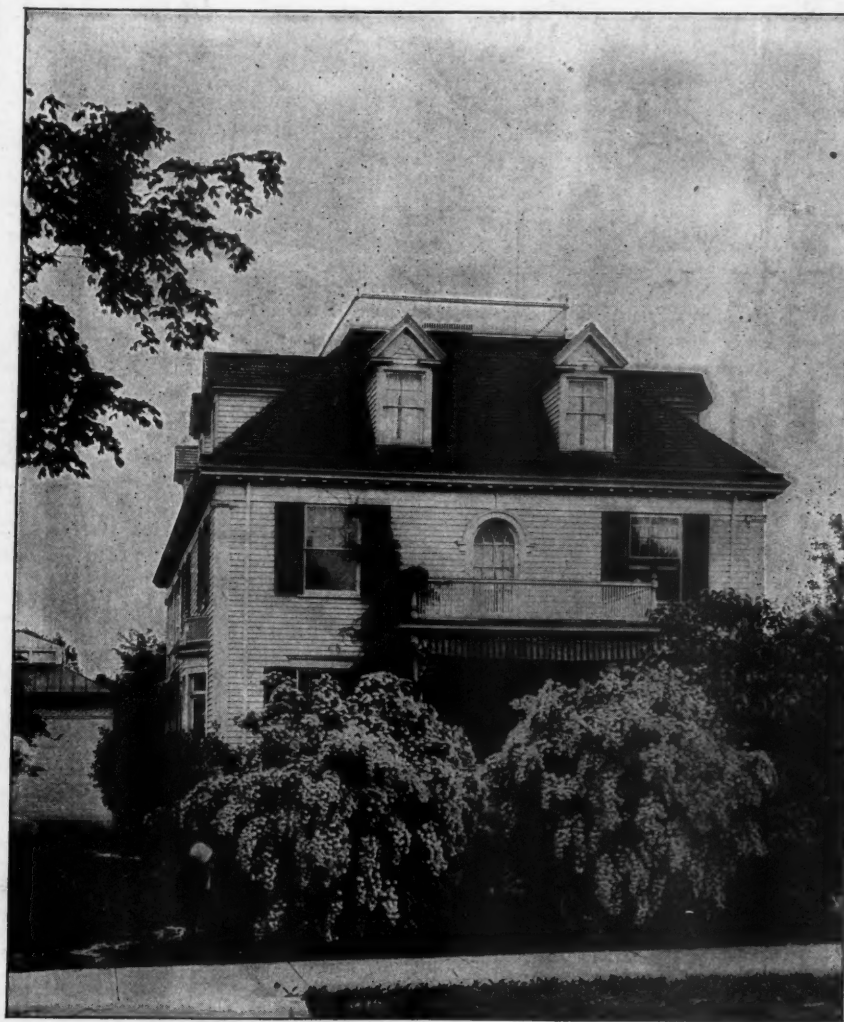


GREEN'S FRUIT GROWER

The Oldest Fruit Journal in America



Charles A. Green, Editor

Rochester, N. Y.

Five Cents the Copy

July, 1916

Green's Fruit Grower

Pin Money

Written for Green's Fruit Grower By
J. M. B., Ind.

Don't sit down and wish your life away like a young school ma'am told us she is doing. Get up and hustle; do something that is worth while. The world applauds the leaders and not those who follow meekly in the rear.

What can you do better than any one else? Surely there must be some one thing. Can you sweep and dust and rearrange the furniture and raise the window shades a degree or two, or lower them a trifle, and make a room take on the appearance of having been freshly cleaned? Very well, then, you are just the person to help Mrs. Brown a day or two out of each week.

Are you up in art? I mean can you cook, for cooking is truly an art and one that I hope will never be classed with the lost arts. If so, on company days you can lend a helping hand to Mrs. Grey and she will thank you in a tangible form.

Can you have the use of a horse and buggy that you can wend your way cityward at your leisure? Then by all means grow strawberries, for they will repay you a thousand fold.

Don't be afraid of soiling your hands. If God made those hands beautiful they will have an added charm if stained by toil and from the juice of the best berry that grows.

Then keep a few hens on the side for there is nothing safer to bank on than an old hen. She can scratch out pin money faster than any other member of the fowl or animal kingdom. Just let her multiply at her own sweet will and she will divide the spoils in a way to make you purse-proud.

Have you a stream on the farm that is fed by springs and doesn't freeze over during the winter? Then grow water cress and fill a long felt want on the city tables.

Canst thou make delicious cottage cheese, country maiden? Then, I pray thee, make oceans of it and thy city cousins will rise up and call thee blessed. Oh, there is much profit in these things for thee if thou wilt but give them thy attention.

Just let me whisper a secret to you. I too had reached that "beautiful dreamer" stage of life and put in my time sighing because some rich relative didn't hurry and shuffle off this mortal coil that I might be busy counting the shekels that were ours by inheritance instead of planning to deceive my friends by trying to make last year's garments take on this year's style. And then I was tired every time the door bell rang, of having to bang the closet door shut to keep the family skeleton from thrusting his poor skinny self forth in the presence of the company.

About this time a wild flower lover friend wrote me of an order that she was filling for an eastern florist and how sorry she was at being unable to supply the shooting star roots that were so greatly desired by the florist, as the pay was excellent. My dreaming ceased with the sudden inspiration I had when I wrote the friend I would supply the roots for the florist.

A portion of our wood lot had been fenced off and left for birds and bunnies to live and thrive in unmolested. A very steep hill that sloped slightly and gently eastward from a dear little stream was gay each spring with thousands of shooting star blossoms. With the fox hound, the collie, and the house cat for company I hied me off to the scene of action. To the music from the little stream the black birds were mobilizing, getting ready for an attack on the southern rice fields, and the crows were driving the hawks far from their summer haunts. On that hillside down which the Indians had rolled their war whoops many, many times ere my great grandparents' days, I clung to bushes and roots and briars and literally tore up the earth to make a Roman holiday.

I learned more while working on that hillside digging those hundreds and hundreds of star roots on warm autumn afternoons than if I had been poring over the books in our library.

In that remote place where no neighbor could have heard my voice had I called I felt that the dear Father of all was nearer than I had ever realized in any other place and that He will show the way to people who hustle while they wait for something to happen. "With one great gulp I swallowed my false pride and resolved to wait for no dead person's shoes, but to study my ability and the wants of the people and to be able to study the situations too and grasp op-

portunities when they presented themselves. I do not wear shabby clothes now, neither do I find time to speculate on the probable length of life of relatives or their amount of this world's goods. I am making good in my humble way because I found myself and my place in the world and thousands of others can do the same if they will study the situation.

Elevating Influences of Horticulture

The whole tendency of horticulture is upward. There is nothing groveling or cruel or sordid about it. It is true that we have to work, and work very hard sometimes, but we have a higher purpose in view than the doing of mere farm drudgery. There is no poetry in weeding and hoeing a strawberry field, as I know by many days of back-aching work, but we can meanwhile see the blushing fruit and smell the fragrance, in imagination, of the next year's crop. The intimate relations we sustain to the most beautiful and luxurious things in the world of nature cannot but elevate the mind.

The gathering of fruits and flowers, hard as we may have worked for them, is suggestive of thankfulness to the Giver of all good. The rain, the sunshine and the balmy air that caused the fruits to grow, to color

dier, he picks up a knapsack, breadpouch, cartridge box or gun, with which to report his discovery, or if nothing is at hand, the dog, returning, by jumping up to his master, or by characteristic expressions, makes known that he has found a wounded man. The master then fastens the leash and gives the command to go in the words: "Where is the wounded?" The leader and a corps of ambulance men, stretchers in hand, follow. In a similar manner, battle fields are searched for wounded soldiers, regardless whether the fallen men are friends or enemies.

"Very often the presence of a wounded soldier is not discovered until the dogs have been set loose. The visual faculty of the dog as a rule is not greater than that of man; in fact, the very opposite is true. However, his sense of hearing is very marked, and above all, the sense of smell. Even when a wind blows most unfavorably the war dog knows how to overcome the resulting difficulty. With the nose on the ground, or raised in the air, the dog sniffs and rapidly examines a remarkably extended area.

Cropping the Orchard

In many cases it is feasible to cut down the net expenses per acre per year, by making the land do double service. If feasible to grow crops in the young orchard, what crops can he grow? It stands to reason that such a crop must have either a cash or a feeding value and that above all it must be a crop that will not endanger the life of the trees. Some crop must be chosen that will allow of proper cultivation of the trees. The fact should never be lost sight of that growing an orchard is the primary thing in view, says Practical Farmer.

One should never raise corn in a young apple orchard if the hired man is "corn minded" and not "tree minded." If the man who cultivates the corn is so constituted mentally that when it comes to deciding whether a hill of corn or a tree must be run into, that he chooses to save the corn, the only remedy is to plant something else in the orchard, or keep that particular man out of the orchard. We have been raising corn upon our farm for so many generations that the average farm-help is "corn minded" and has it "bred in the bone" to respect a hill of corn. A "corn minded" man will never make a good fruit grower.

The Stayman Winesap

Mr. Chas. A. Green: I have noticed your comment and also Mr. Close's on some Stayman Winesaps that you sent him. I would like very much to know where you got these Staymans. The Stayman grown in the mountains of Virginia has a flavor and a texture that is unequalled by any grown in other states, and I have had them from Arkansas, Oregon, Colorado, Washington and many other states of the apple growing territory, but for flavor and fineness of meat, as well as color, I have never seen them equalled anywhere.

It is difficult where one has been using Staymans which were grown in the mountains of Virginia to eat any other apples afterwards. I have noticed this particularly this year, as we sold a good many Staymans to the hotels in the South and I visited a good many of these hotels this past winter and the general comment on the part of the guests was that they had never seen or eaten such apples as these Staymans, and some of these people had eaten apples considered the finest grown in the West, as they were wealthy people and could buy the best, but they were surprised and more than satisfied with the Stayman and commented most favorably upon it. I am curious to know where you got these Staymans. Evidently they must have come from the lower elevation of Virginia, as there is quite a difference between the Stayman grown on 600 foot elevation and 1500 feet. The same applies to the York Imperial and also the Lowry Seedling. The Lowry is an apple you are not familiar with, but according to my opinion it far exceeds the Delicious. It is equally as good an eating apple, and one of the finest keepers in the world. I have kept them thirty-eight months, and they were practically in as good condition at the end of that time except the loss of flavor.—James Craig, Va.

Reply: I cannot recall the locality in Virginia from which I received the apple labeled Stayman Winesap. I am ever looking for a Stayman apple for my own eating whenever I visit Washington, Baltimore, New York, Philadelphia or Boston, and have found these apples from Oregon of good size, not deep red covering the skin, fine tender flesh, an attractive flavor, but not the highest in quality. When I received this sample from Virginia I considered it larger than the Oregon apples, coarser in flesh and lacking in quality, therefore I wrote the friend who sent the apple that I doubted if it was the genuine Stayman, but was afterwards assured that it was correctly labeled Stayman.

At the last meeting of the New York State Horticultural Society I made the acquaintance of an exhibitor from Oregon who had a large collection of many notable varieties, among which was the Stayman Winesap, generally much more highly colored than those I had previously seen, but having the same appearance as the Staymans I had bought for my own eating in various cities, claiming to have come from Oregon.

I advise Virginia fruit growers to compare their Staymans in size, quality and color with those on the fancy fruit stands that came from Oregon or some other western locality.

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and ripen are all from above. They conspire together with the care we bestow upon our trees and plants, to make them beautiful and delicious. Let us be joyous and thankful, and strive to induce others to join our peaceful ranks.

GERMAN WAR DOG IN FIELD How the Faithful Animal Acts on the Firing Line

In the November Popular Science Monthly and World's Advance, Johann Gottlieb, who is in charge of the war dogs of the German army, gives an enlightening description of the work of these faithful animals on the firing line. He says:

"When a war dog is loosed from the leash holding him and receives the command, 'Find wounded,' he rushes in the direction indicated. He noses around through fields, forests and swamps. Moved by his instincts of smell and hearing, the war dog rarely misses finding a wounded soldier. This is especially true when a number of dogs operate together.

"When a war dog has found a fallen sol-

I have a small cherry orchard, and planted out a few more trees this year. Also a young peach orchard, for what is more delicious than peaches and cream. I used to raise the small fruits quite extensively, but it has become so difficult to get good pickers, I have turned my attention to other things. But they are too good to do without, so raise them in a small way. From my little strawberry bed I selected the finest fruit for market, and received the very highest price for it. The smaller berries furnished me with all that I could use on my table and for canning.—C. R.

Good Short Stories

The lady at the corner house saw old Uncle Tim starting away on a fishing expedition and, knowing how hard his wife worked, thought it a good time to reprove him for his laziness.

"Tim," she said, "ought you to leave your wife at the washtub while you go off fishing?"

"Oh, dat's all right, mis," replied the old colored man. "Mah wife don' need no watchin'. She'll wuk jes' as hard as if I was dah."—Exchange.

THE
Fruit
in

Volume 36

Grow
Written for
By EARLE

The proper practice is cultivation of fruit trees during the winter; it is the most important, and the most neglected, and the most profitable of plant food. Humus is a valuable material without it the soil is unproductive. It is the most valuable to the soil. It can be made by composting manure, and this is the most available plant food. It is the most valuable to the soil.

The cover crop is a valuable material without it the soil is unproductive. It is the most valuable to the soil. It can be made by composting manure, and this is the most available plant food. It is the most valuable to the soil.

Of legumes, the clover is good. It is a very early nature which will produce as much as any other. It is a good covering for the soil. It is a very early nature which will produce as much as any other. It is a good covering for the soil.

For a good cover crop, the clover is a very early nature which will produce as much as any other. It is a good covering for the soil. It is a very early nature which will produce as much as any other. It is a good covering for the soil.

In soils having a high percentage of humus, the clover is a very early nature which will produce as much as any other. It is a good covering for the soil. It is a very early nature which will produce as much as any other. It is a good covering for the soil.

Renewal
W. J. Green, of the Experiment Station, has been elected to the position of Secretary of the National Fruit Growers' Association. The Farmer's Guide is a thorough study of the course of the fruit grower. A large number of the fruit growers of the South will be benefited by the publication of this book. It is a fair price on the part of the publisher.

The Oldest
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GREEN'S FRUIT GROWER

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Green's
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Company

Volume 36

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Number 7

Grow Cover Crops

Written for Green's Fruit Grower
By EARLE W. GAGE, N. Y.

The proper practice in the care of orchard is cultivation and cover crops. Too many fruitmen think of a cover crop as a protection during winter. It is more than that; it is the most essential aid in fertilization, and the most important source of humus and an economical and valuable source of plant food.

Humus is a vital factor in soil fertility. Without it the soil is like a bank of sand or a chunk of clay. But humus makes possible life in the soil by producing conditions favorable to the development of the soil bacteria. It cannot be considered a permanent thing, but like food, is being constantly consumed. It must therefore be replaced, and this humus furnishes, making available plant food already in the soil and aiding in the conservation of the soil moisture.

The cover crop supplies this needed humus in the shortest way, the kind of cover crop and time of planting being together with the season and local conditions. In wet seasons it should be sown earlier than normally, thus checking the vigorous growth of the trees usually made. In dry seasons the cultivation should be continued later than usual to conserve the moisture. But on soils where the trees naturally make a good growth, the cover crop should be used earlier than in others.

If the trees are making a rapid growth, it would not be advisable to use a legume as a cover crop, as the nitrogenous fertilizer value of the legume would cause the trees to make more growth. In such orchards a non-legume should be used. Oats is probably the most popular, although rye is also extensively used. The disadvantage of rye is that it makes too quick a growth in spring, drawing great quantities of moisture, and gets too tall for easy plowing before most growers get to the work. But if attended to, this is a good cover crop.

Of legumes, the common red, mammoth, and crimson clovers are good. Vetch is also often used and is more in use every year. This is especially valuable in soils of a sandy nature which lacks humus. No legume cover crop will produce as much vegetable matter to turn down or will gather as much nitrogen from the air as vetch.

Oats are successful and profitable in conjunction with legumes. Vetch and oats, and common red clover and oats are good combinations. The oats make a quick growth in the fall, which the legumes often fail to do, and furnishes a good covering for the ground during the dormant season. It also furnishes protection in winter to the legume, and will help keep it from freezing out. The legume makes a vigorous growth in the spring to supply green manure when turned under.

For a good combination of green matter to turn under, vetch and rye are good, making a good stand. As both make a quick spring growth, care must be taken not to let it get too high before plowing.

In soils having plenty of humus, catch crops are used successfully. Many growers prefer to disk their orchards in spring instead of plowing and use, on that account, some cover crop which dies out with the frost in the fall. Such crops consist of oats, buckwheat, spring vetch, Canadian field peas, the first two named being the most commonly used. A combination of vetch and field peas is a very good one for this purpose, and may be mowed in the fall and used as a winter ration for the stock.

Renewing Apple Orchards

W. J. Green, chief horticulturist of the Ohio Agricultural Experiment Station, addressed the December meeting of the Summit county, Ohio, horticulture society, on the subject of the "Rejuvenation of old Apple Orchards," says the Farmer's Guide. Mr. Green has made a careful and thorough study of apple culture and speaks with authority. In the course of his address he said that the first point to decide is whether or not the orchard is worthy of rejuvenation. A large proportion of the old and neglected orchards of the State will not pay for the labor and expense that will be necessary to bring them to abundant fruitfulness, because the varieties are not such as will sell at fair prices on the market.



A field of buckwheat used at Green's Fruit Farm as a cover crop. At the rear of this buckwheat is a row of two year old apple trees, being the first row of a large block embracing 12 acres. Imagine the wonderful growth of these trees, all of which is made from a single bud in two years.

Efficient Farm Drainage

Frequent Inspection and Prompt Repairs Necessary

In the spring of the year, when land is being prepared for planting, there are frequent complaints from farmers that the drainage systems which they constructed a year or more before are not improving the land as they had expected, says Weekly News Seller. Perhaps the soil is just as wet as it was before installing drainage, but is this a valid reason for condemning drainage? To answer this question correctly, other questions must first be answered. Were the drainage improvements in the first place properly designed and constructed? If the answer to this question is affirmative, may not some defective condition have developed in the system since construction? Have the ditches been kept open and clean or have they been permitted to cave in and deteriorate generally? Have the outlets to the tile drains been allowed to close during the winter? Have the inlets and catch basins been permitted to become choked with leaves and other dry vegetable matter of the previous season? If these conditions exist, does not the failure of the system to give the desired results lie with the farmer rather than the system?

In the spring, when the root system of the young plant is developing, it is essential that the level of the ground water be maintained at such a depth as always to permit free growth of the roots downward as well as laterally. The control of the water level is the purpose of any drainage improvement. The largest returns on money invested in such improvements can be obtained only when they accomplish their real purpose, and this purpose can be accomplished only by keeping the drains in the best possible state of efficiency.

To obtain the greatest degree of efficiency in drainage improvements, as in any other work, frequent inspection is necessary. Brush and weeds should be cut from the banks of the open ditches and the latter cleaned out to the proper depth. Openings should be made into the ditches where necessary to permit the surface water in the fields to flow off rapidly.

In tile systems, if the outlet has not been protected by a headwall, one should be constructed, for unprotected outlets are often damaged by stock and the action of surface water. If a tile drain empties into an open ditch or swale, steps should be taken to see that sufficient fall exists in the ditch to remove the water as fast as it is discharged from the tile; otherwise the water will back up into the tile and the efficiency of the drain will be impaired. Where surface inlets and sand traps have been installed in a tile system these should be examined, and cleaned if necessary.

To realize the maximum results from any drainage system it is therefore essential that inspection be frequent and that necessary repairs be made promptly.

Speaking of Apples

By HOLLIS B. BAGG, CONN.

Some years ago I purchased a small place fruited to pears and apples in bearing. These trees according to the custom at the time of planting were headed high. Four years ago when I started to spray I found that it was almost impossible to spray the top of these trees; this led me to cut out the entire tops. Some of the limbs removed measured six to eight inches in diameter; these I painted with a thick paint consisting of lead and oil.

My next step was to produce limbs on the body of these trees just where I wanted them. I introduced buds under the bark at these points and although I am considered a good grafter (of trees) every bud so set failed to take. I believe that this was due to the difference in the age of the barks.

The following year I took cions from each tree and made an opening in the bark on the body of the tree the same as I would to bud, cutting the end of the cion wedge shape and leaving two buds on each cion; after I inserted them in the opening under the bark I bound the usual way with tape and every one of them lived and made an average growth of about three feet.

The grafting was done the last week in April. Last year I finished my pear trees and the grafts are all growing in fine shape. I have shown these grafts to several expert orchard men and they tell me that this method of producing a limb on the body of a tree just at the particular point you wish is a new one to them, therefore, I feel that I can safely claim it as a discovery.

My trees were planted about thirty years ago and are in sod. They get a top dressing of barn yard manure and are vigorous, healthy trees, heavy bearers.

The King apple is the best seller and brings a good price. Among pears, the Bartlett leads all.

I have kept apples for two years in my cellar as sound as when picked from the tree and have sold them in August for \$5.00 per barrel. The man who sold me the place grafted this tree and prized this apple highly but did not know the name of it.

Some time ago the papers had a lot to say about an apple that Burbank had produced that was part sour and part sweet and it was thought to be a wonderful thing to do and something new in the apple line.

Fifty years ago on my father's place in Bernardston, Mass., there was a tree that bore an apple one-half of which was sweet and one-half sour. The skin over the sweet part was yellow and over the sour part it was green. The line that divided the color was very sharp and it also divided the flavor. As the years went by the part that was sweet grew smaller and the sour part larger and instead of being two equal parts we would find it divided into three or four parts but still the color line marked the dividing line in the flavor. After a number of years the sweet part disappeared altogether and the apple became sour and green in color very much resembling a greening apple. My father told me he produced this apple in the following manner, but that he had many failures before he made the graft grow.

He took a cion from a R. I. Greening and another of the same size from what we called a Golden sweet; then he carefully split these cions through the bud, matched, bound them together and waxed them. He then grafted them into a young tree using the cleft method of grafting.

I believe my father's statement of the method of producing the apple and I know the apple existed for I have eaten many of them and I have no doubt but what I could find some of the boys who came to play with me and get a sweet and sour apple, for the boys were very fond of them.

Fruits Damaged by Frosts

Some damage was done to fruit by cold weather and frost in most of the Rocky Mountain and Plateau States, as well as in eastern portions of the Pacific States and on the eastern Rocky Mountain slope. The most serious damage, however, seems to have been done in Idaho and Utah. In southern Idaho it is believed that commercial apples, prunes, peaches, and cherries were practically ruined, and the berry crop badly injured. The report from Utah states that apricots, early cherries, and strawberries were nearly destroyed, and that the loss in peaches and apples was about one half.—U. S. Crop Bulletin.

Eastern Fruit Men, Prepare!

Written for Green's Fruit Grower By
EARLE WILLIAM GAGE, N. Y.

As the evangelist of old said, "The accepted time is at hand!"

Fruitmen of the Eastern portion of the United States must prepare. Never before in the history of horticulture was the future so bright; never the possibilities more glorious.

Facts speak louder than words in the judgment of thinking men. Here is a handful of cold facts: One-fourth, or approximately 25,000,000 consumers of fruits reside in the states of New York, New Jersey, Pennsylvania, Massachusetts and Connecticut. Transportation facilities and consuming centers are well established in this great section. It is possible to distribute perishable fruit and fruit of storage qualities with profit to the grower and satisfaction to the consumer. This great field is being supplied, for the most part, by fruitmen wholly outside the area mentioned. What are the growers inside going to do? Keep on growing cider and drier apples, cull pears, etc., or are they aiming to meet the requirements of their distributing field?

The Eastern fruitman's location is strategic for home marketing, while the possibility for the expansion of a foreign market, due to nearness to the Atlantic seaboard, is intense. For the most part, European countries are depending upon Washington, Oregon, Idaho and northern California sections for their fruit. Why not the Eastern grower answer this demand? We can have a carload of apples in London before the Oregon fruitman could deliver the same car in Buffalo. Location and quality determines sales; we have both, but we need a uniform grade, pack and package. Co-operative effort will secure this for us as it has for the Northwestern growers.

The move which the apple growers of Chautauqua County, New York, recently made should be followed over the entire East. This region is a long neglected fruit-growing area. Although grapes have been made a crop of vast commercial proportions, some 40,000 acres being devoted to them, the exceptionally inviting altitude of 1,400 to 1,500 feet has been over-looked for lesser possibilities. The growers have organized in a small way, and promising things seem to await us for the future.

Here is Our Field

In our domestic field reside an exceptionally large proportion of non-agricultural people, with local markets of rare facilities for distribution. It is difficult to locate what we might term a remote farm; our field is crossed and recrossed by a net-work of transportation lines. These people are presently consuming a relatively small quantity of fruit for which remunerative prices are paid. As an illustration: At present the consumption of apples is restricted to approximately 20 per cent of the country's population. Through proper distribution, salesmanship and advertising at least 50 per cent of the population can be induced to purchase neatly boxed apples, according to facts collected by the Northwestern fruitmen. It has been the universal experience that a large, steady demand operates to reduce the margin of profit as the volume of business increases. Both producer and consumer experience a reduced cost. Our domestic market may reasonably be expected to absorb 30,000 carloads of fancy and extra fancy box apples at prices very remunerative to the grower. And our export business is just beginning to creep. When the war ceases and maritime commerce again becomes normal it is reasonable to anticipate that fruitmen may market outside of the United States between 5,000 and 10,000 carloads of apples per year. During August, 1915, Hood River Valley growers sold 100,000 boxes of apples to neutral Netherlands, at \$1.50 per box, the war notwithstanding. Suppose Eastern fruitmen had have been organized rightly? We could have had that and other remunerative orders. Australia and South America present ripe fields for fruit export endeavor, while China and Scandinavian countries will open relations when steamers are supplied for the shipments. They have tasted our luscious apples and want more.

Yes We Can Deliver the Goods

Ability to deliver the goods in the domestic and foreign market centers makes the Eastern section of this country the logical fruit growing portion. Northwestern fruitmen long since became aware of this fact, for when they entered the business they investigated just what our supply and location would mean as a competing force. They found these facts to be true: The Eastern grower can put a barrel of apples into the waiting freight car for \$1.25 and break even, while it costs him between 20 and 30 cents to send that barrel to any live Eastern market. If he was able to receive but \$300 for that acre of fruit, he would not be a loser, for he would be repaid his cost of production plus freight.

Lack of ability to compete with the Eastern fruitman's location and fruit will spell failure for the Northwestern fruitmen, unless they send only extra fancy and fancy fruit East. To reach this same market the Northwestern fruitman must pay his railroad \$300 for freight alone. It costs between 60 and 75 cents to produce, pick and pack a box of Western apples. Therefore, these growers must receive \$660 in order to break even.

The first step would be the proper handling of the present production; the second step the development of the area adapted to fruit growing of various types. All fruit must be properly produced, carefully picked, uniformly packed, and sold in bulk. No one grower can hope to long live at this game in its highest stage; he must depend

upon the team-work which his neighbors and community can bestow.

There are already sufficient exceptions to inferior grading and packing to effectively demonstrate the superior profit of better methods, and by these the wise fruitman is being guided. The importance of the fruit industry of the East necessitates a better development of business methods in handling and marketing the crop and there is a very noticeable and creditable tendency to effect these ends. Only upon them can be constructed a fruit industry of lasting and profitable proportions.

The Value of Sheep on the Farm

It has never been disputed that sheep are of great value on the farm. Some men who have had years of practical experience with sheep and have raised a flock in connection with other classes of live stock, declare that they have derived the largest and easiest income from sheep. From the standpoint of profit they consider: first, the small sum of money required for the establishment of a flock; second, the small expense incurred in building suitable shelter for sheep; third, the little care sheep require in the summer, during the farmer's busiest time; fourth, the extermination of weeds on the farm by the sheep; fifth, the enrichment of the soil on which the sheep graze by the even distribution of their manure, which is of much value to the land; sixth, that with present prices of wool a breeding ewe ought to pay for more than her keep and that her lamb or lambs are their net profit; and seventh, that since the demand for them is ever growing stronger, mutton and wool are constantly increasing in value.—Wisconsin Bulletin 263.



The farmer at the left says to the young tree: "I will take care of you." Then later the tree says to the farmer: "Now I am in condition to take care of you, returning the many acts of kindness you have shown to me in days past."

Dynamite as an Aid to Intensive Cultivation

Written for Green's Fruit Grower By
A. H. HARRIS

Being a professional blaster and having used explosives in practically all lines of farm blasting, I find it one of the greatest aids to intensive cultivation and farm improvement in general.

For maximum returns from the farm operations at a minimum expense every available spot must be made to produce its utmost. This cannot be hoped for where a large part of the farm lands are dotted with stumps, boulders or other obstructions which hinder the free operation of modern machinery.

Farm blasting on permanent farm lands is not an expense account but really an actual investment.

Every dollar expended for improvement is just that much more added to the value of the farm. Many times these improvements I find pay for themselves in one or two seasons of cropping.

A few weeks ago I completed a nice job of stump blasting for a Mr. Ives who came from Iowa. He expected the work to cost him about \$25.00 per acre. Instead the average cost per acre was a little over \$15.00.

He told me that people where he moved from on account of high land prices were forced to make every acre produce its utmost and that farmers paid more attention to improving and building up their lands than they did to raising so much stuff to be put upon a glutted market many times below cost of production.

This sad condition of affairs will be found in practically every section where cheap land is to be had and where farmers try to cultivate three times as much land as they should.

Subsoiling with explosives is another method of increasing the farmer's productivity especially on soils which have tough clay hard pans underneath. I drill holes about 15 ft. apart and about 3 feet deep and explode one-quarter pound of dynamite or farm powder in each hole.

For best results this work should be done in early fall when the soil is driest.

After this is thoroughly broken and becomes saturated with water to this depth it will insure one's crop going thru the severest drouth and making a splendid yield in spite of the most adverse conditions.

An Advertising Age

It is the age of advertising. It also appears to be the age of pie, the great American dish. In Oregon they grow a pie berry, a cross between a blackberry and a raspberry, known as the loganberry. The crop was so abundant that it could not be sold. The growers thereupon dried the berries and found they had nearly 200,000 pounds on hand, with selling price of 22c. a pound, but jobbers were unable to move the crop at one-quarter that figure. Then someone suggested to the Willamette Valley Prune Association which was loaded up with these berries, that they spend \$1,000 in advertising loganberry pies. Thousands of restaurants at once began to call for loganberries, and this stimulus the crop found a market.

Everywhere the producer has discovered that the easiest way to reach the consumer is by advertising his product and thus we have advertising campaigns for raisins, prunes, oranges, nuts and apples. Of late, the distributors of stocks and bonds have discovered that the best way to reach the investor is through the advertising columns of publications of quality. And now the manufacturers of lumber, cement, iron and steel and various gross commodities that were thought to be far beyond the realm of advertising, are in the market for space and find it most valuable as an adjunct to increasing business. Never before was so much money spent for advertising as is being spent today and never before were such returns realized on the investments made.

In the language of Miss Olive A. Cole, before the Publicity Association of Boston: "Today the advertising man who calls on you has something more to offer than blue sky to offer. He has service—wonderful service—that is illuminating the dark places—a force that is making the desert to bloom as the rose."—Leslie's.

Advantages and Disadvantages of the Tractor Engine

The theoretical advantages of mechanical power in farm work are obvious but it is believed a prospective purchaser of a tractor would be interested in knowing what the men who have used tractors have found to be the principal advantages and disadvantages in actual practice.

Several hundred Illinois tractor owners were asked questions; "What do you find to be the principal advantages of a tractor for farm work?" and "What are the principal disadvantages?"

A summary of the replies to these questions disclosed the following interesting points:

The ability of the tractor to do the heavy work and do it quickly, thus covering the desired acreage within the proper season, was considered the principal advantage. The saving of man-labor and the doing away with his help was placed next. The ability to plow to a good depth, especially in hot weather, was placed third, while economy of operation, the displacement of horses, and the ability to use the tractor day and night were not mentioned by very many owners, although they are usually considered theoretically, to be decided advantages.

Under disadvantages, difficulty of efficient operation and packing of the ground when damp were the principal points. Expense came next, while delays and inability to use the tractor for many kinds of work for which horses could be used were given by several owners.

Economy

The fact that reduction in the cost of operating a farm was not emphasized as an advantage of the tractor, its expensiveness is frequently mentioned as a disadvantage. It should be carefully considered by a farmer who contemplates buying a tractor with the hope of reducing his present operating expenses.

A comparison of the cost of doing farm work with tractor with the cost of doing the same work with horses means practically nothing, for the reason that several horses must ordinarily be kept on the average farm even where the tractor is used. Comparisons must, therefore, be made between the cost of operating a farm with horses alone and the cost of operating with a tractor and a certain number of horses.

Size of Farm and Tractor

Every improved farm machine reduces the man-labor required for farm operations, thus permitting one man to accomplish more work and so farm more land than by the older methods. However, it is an obvious and well known fact that a farm business must be of sufficient size to permit of the economical use of an improved machine in order to justify the necessary investment therein. This is, many small farms must either use the old methods or hire a modern outfit, because the small amount of work to be done each year does not warrant owning the machine.

Among the more important facts disclosed by a study of the use of the tractor for farm work are those relating to the increase in the acreage which can be farmed by one man, when a tractor is used in connection with horses over that farmed with horses alone.

Approximately 75 per cent of tractor owners in Illinois state that the tractor has proven a profitable investment to them. Of this number about one-third, after the purchase of the outfit, increased the acreage which they were farming, the increase averaging about 120 acres per farm. On the other hand, of the men who found the tractor unprofitable, only one-twentieth increased their acreage after purchasing the tractor.—Farmers' Bulletin 719.

Editor

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One Year with Orchard Fertilizers

Editor of Green's Fruit Grower: Seven hundred and sixty-eight barrels of Baldwins per acre increase is the result obtained by the Massachusetts Experiment Station in a 20-year test with fertilizers on orchards. The total yield of the trees for 20 years on the unfertilized area was 50 barrels per acre against 818 barrels on the fertilized area. The fertilizer used in the test cost about \$12 per acre per annum.

The accompanying photograph shows the effect of fertilizer upon the yield of apples on a tree in one of the cooperative tests conducted by the Ohio Experiment Station on farms in southeastern Ohio. The loaded tree shown here had never yielded a commercial crop of fruit until fertilizer was applied. The picture was taken first year after application.

In southeastern Ohio where the test was conducted, the land selected for orchard purposes is usually not the most fertile field on the farm, the rich low-lands being retained for grain culture. Thus, the orchard is handicapped in the start and if no assistance is given it in the form of available plant food, the life of the trees will be short.

Each succeeding crop of apples produced, as a result of thorough spraying and proper pruning, renders greater and greater the need of feeding the trees; and, unless these fruiting trees are provided with nourishing plant food, it will be but a few years until the trees will die of starvation.

If farmers gave their corn or other crops no more plant-food than they do their fruit trees, they would not expect a crop. It is known that continually cropping a soil depletes it of certain elements that are necessary for plants and trees to grow best and produce the highest yield of quality grain or fruit. The plantfood ingredients removed are ammonia, phosphoric acid and potash.

Ammonia as supplied in fertilizers promotes wood growth and makes dark green leaves. Phosphoric acid hastens the maturity of the fruit, so that it escapes the early frosts in the sections where the period of growth is short. Potash helps color the fruit, improves flavor and increases the size.

The application of fertilizers, especially those containing ammonia aids in overcoming the possible danger of injuries to the leaves caused in the using of spray material.

Orchard fertilizers should be applied about the first of May, just the time when the maximum benefits may be derived from the readily soluble and quickly available elements of plantfood. At this time of year, the trees are freely springing into growth and need all the plantfood they can obtain.

Average fertilizer applications for general orchard conditions are:—On sandy soils use 3-6% of ammonia; 8-12% phosphoric acid and 8-10% potash. Loam soils should have 2-3% ammonia, 8-12% phosphoric acid and 6-8% potash, while clay soils should be treated with 3-5% ammonia, 8-12% phosphoric acid and 4-6% potash. This should be applied broadcast at the rate of 400-600 lbs. per acre. The greater part should be scattered directly under the tree—but leaving the base of the tree always free from any vegetation. The remainder should be spread uniformly between the rows to encourage the sod mulch.

Prof. Green of the Ohio Experiment Station says:—"There are yet enough idle apple trees left in good condition to increase the average annual product by one million bushels. Many of these trees are idle because of lack of plantfood in the soil."

Why not apply this plantfood and reap the million bushels, along with many more bushels from the hardy trees.—Chas. Dewey.

Summer Pruning

Professor H. A. Surface, State Zoologist, Harrisburg, calls attention to the fact that this is the season for summer pruning, and that this comparatively new feature of horticulture can now be made exceedingly valuable in many orchards.

He says: "Summer pruning is chiefly for the purpose of giving better ventilation to the interior of the tree top, and of slightly modifying the vital activities of the tree in such a way as to promote the transformation of leaf buds into fruit buds. This means a heavier fruit crop where the summer pruning is properly done, at the right time.

"For the purpose of ventilation of the top of a tree, which is very important where growth is dense, the summer pruning can be done at any time. Even comparatively severe pruning can, contrary to the usual opinion, be done with good results at any time it is desired; but, as a rule, the very severe pruning, such as the amputation of a branch three inches in diameter or larger, should be left until the dormant season, unless the special desire of the operator is to check the growth of the tree. Let it be laid down as a fundamental rule

that severe pruning when the tree is dormant promotes or stimulates growth, and severe pruning when in leaf checks growth. One can tell when trees need summer pruning for the purpose of ventilation by noting the yellowish tinge of the leaves within the tops. Where the foliage becomes so dense that the leaves within any top branch, or cluster of branches, commence to become yellow or look starved, enough pruning should be done to give ventilation to the top.

"When a tree top has been allowed to grow densely, without such ventilation by pruning, the leaves are not healthy, interior fruit buds are not formed, and the next fruit crop will be only at the outside of the tree. The purpose of the horticulturist should be to produce fruit in the interior of the tree tops, as well as at the outside. He can only do this by keeping the fruit buds and spurs healthy both within and outside the top.

Some July Notes

Written for Green's Fruit Grower By

F. H. SWEET, Va.

The strawberry bed is now through bearing for the season. If it is more than three years old, it has practically run out and should be turned under by deep spading or plowing so that the sod will rot. The soil will then be ready for new plants in the early fall. A great many make new beds at this time. With favorable seasons, or if kept well watered artificially, the plants will attain sufficient growth to bear a profitable crop next year.

Look after the hybrid perpetual roses. The June blooming over, they should be cut back, cultivated and fertilized. By this process a more vigorous growth will be secured, and it is on this growth the gardener must depend for occasional blooms which follow the first blooming. If the bushes do not receive this treatment many of them will not bloom again during the entire season.

Tea roses will need attention at least every two weeks when all the old branches, which have developed their buds, should be clipped. As with the hybrid perpetuals, blooms can only be expected from new growths of the plant. It is essential that the plant be kept constantly developing and, consequently, in a healthy condition.

Chrysanthemum 'plants must have' good attention if satisfactory blooms are to be obtained. They must be kept growing rapidly, and to secure this rapid growth keep the soil stirred and reasonably moist. A good fertilizer of fine bone-meal or liquid cow manure should be applied liberally. A few drops of ammonia water, well diluted, poured about the roots once a week just at this time, will greatly stimulate the growth.

The shapeliness of the chrysanthemum plant should be watched, for of all plants an awkwardly shaped chrysanthemum is the worst. Pinch back the most robust branches to secure uniformity of growth. The sightliness of the plant will more than recompense any loss of blooms.

Relation of the Government to the Marketing Problem

By BEVERLY T. GALLOWAY

Dean, New York State College of Agriculture at Cornell University

The marketing of farm products is an extremely complicated problem. Manufacturing involves the observance of certain fundamental rules and principles which may be formulated and shaped into a code of action. The production of crops from the soil is an art supported by science, and this art lends itself more or less to certain given principles and rules that may be catalogued and applied. Marketing, on the other hand is empirical. There is no science, and as yet little system, to it. Hence the field for its development is open.

We find the farmer, the man who produces so much of the material to be sold, not long removed from a period when the farm was self-contained. In a good many sections the farmer can still manage to live fairly well on what he produces at home and on what he can sell and barter near by. It is beginning to dawn on him, however, that with all the rapid economic changes he is more and more being brought into competition with the world, and that as an individual he is unable to cope with the situation. In his bewilderment he appeals to the State, with the result that there is much scurrying and scuttling here and there, and innumerable bills for relief are introduced, which seldom accomplish anything except, perhaps, to secure a few votes for the introducer. This procedure may continue indefinitely until out of it there is gradually developed some plan or policy that will be far-reaching and permanent in its effects. This is economic evolution in a democracy—a tremendously wasteful and costly proceeding, but in the end occasionally successful.

It took nearly half a century, at a cost that no one can tell, to evolve a system of currency which from its very simplicity one is amazed to find was so long in coming. It seems fairly reasonable, therefore, to surmise that in the marketing of farm products and the Government's relation thereto, we must look forward to a period of shifting and changing and more or less uncertainty while education is doing its work, until, through one means or another, the people are brought to think and to act in terms of community effort. For the marketing problem now and in the future is a community problem, which means that any country founded on the tenets of a democracy must first heed the great call for education effort, in order to bring all the people to a realization and understanding of the need, the important need, of working together.

All the issues are now very much confused by the action and operation of many types of so-called co-operative or collective agencies whose primary object is pecuniary gain for the few rather than the establishment of fair and just relationships and mutual helpfulness for all. It will require a decade of active educational work to bring about a proper understanding of some of these matters and to

bring our people to the state of mind necessary to enable us to proceed with broader and better constructive plans. Nothing will accomplish so much as the mere bringing of the people together to discuss the questions at issue under agencies that will guide and not attempt to direct. Already the Government of the United States is laying the foundation for future work of this nature through the organization of a broad scheme of extension work, localized in counties but guided by a comprehensive scheme of co-operation through the colleges of agriculture in the respective States. I refer to the co-operative work of the Federal Government with the state colleges in the conduct of the county agents' activities.

We have only to recall what has taken place in this country in the past thirty-five or forty years to realize what these changes mean. In the handling of cotton, of grain, of meats, and of milk, all vital to our welfare, we have seen uncontrolled concentration developed to the point where the concentrators so well control the situation that those who provide the raw products can no longer afford to take the risks; hence they give up the business. The raising of cattle in the Middle West is no longer a business with the farmers; it is a gamble. The milk situation is very little better.

Government may also function in developing the principles that should govern in the storing and warehousing of farm products. Undoubtedly our food supply would be greatly stabilized, and the violent fluctuations in prices, detrimental to both producer and consumer, could in a measure be overcome, by a proper system of regulated storage. Here again we must guard against the fallacy that relief will come through mere legislative action without regard to the fundamental, economic, biologic, chemical, physical, and other

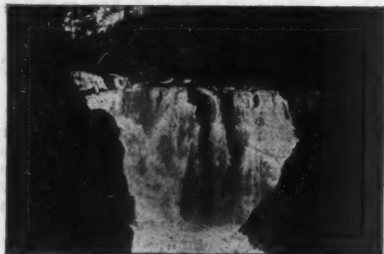
(Continued on Page 11)



The effect of fertilizer upon the yields of apples. This tree had never yielded a commercial crop of fruit until fertilizer was applied. Taken first year after application.

A Wild Vacation

Taken by the Superintendent of the Office of Green's Nursery Company
as Reported by C. A. Green



Aubrey Falls—165 Feet High



Squaw with Pappoose at Biscotasing



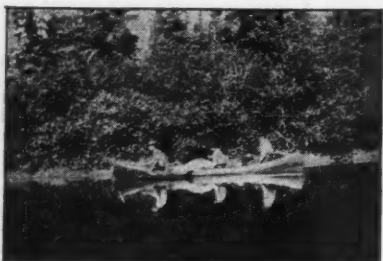
Shooting One of the Smaller Rapids



Mississauga River Near Lake Huron



Lunch at Noon—Always Welcome



A Reflection Picture

"What part of the country did you visit on your vacation?"

"I started about 500 miles northwest of Toronto."

"On what railroad?"

"On the Canadian Pacific."

"At what point did you leave the railroad?"

"At Biscotasing."

"This then was the jumping off place?"

"Yes."

"What can you say about this town?"

"It is merely a station of the Hudson Bay Co., and a French fur trading post. It has two or three families of white people and about thirty or forty families of Indians. It is a newly built place. Forest fires started there last year and completely wiped out the whole town. Not a stick was left standing."

"How do these people get a living?"

"All the white men are principals in either the Hudson Bay Co., or the French Fur Trading Co. The Indians all trap fur in the winter, which they sell to one or the other of these two companies."

"What stream or lake is nearest this point?"

"There is a series of lakes connected with the Spanish river, which flows into James bay, and then into Hudson bay."

"How did you proceed from this point?"

"We were outfitted by the Hudson Bay Co., who secured an Indian guide for each of us. We stocked up with two weeks' provisions of food and paddled in two 16 foot canoes. We white men paddled in the bow of the canoe and the Indians in the stern. We averaged between 25 and 30 miles a day, all depending upon the distance between the camping places. We carried over 49 rapids. They averaged from 100 yards to three miles. The shortest carry was 100 yards and the longest three miles. It has been a heavily wooded country, but it has been burned over and there is now a second growth, principally of evergreens."

"Who set fire to the woodlands?"

"It was caused chiefly by an overturned lamp in one of the Indian houses in Bisco. One disastrous fire cleaned out that entire section. I estimate it roughly at 10,000 acres. All valuable pine timber. No, it had never been cut."

"What kind of fishing did you find?"

"Brook trout in the smaller streams, lake trout in the deep lakes, and pike and pickerel everywhere."

"Could you see much difference between the pike and the pickerel?"

"There is a marked difference. The pike is a grayish green fish, not attractive at all. The pickerel is a beautiful fish, shaded somewhat like a sunfish with almost the coloring of a brook trout."

"It did not take long to catch what you wanted to eat?"

"No, we could catch all we wanted to eat in fifteen minutes."

"You were deprived of the pleasure of fishing probably on account of the ease of getting your supply of food?"

"Yes, to some extent, but on the other hand, the fish there are much gamier and put up a better fight than they do in warmer waters."

"How about the climate?"

"While we were there the days were hot and the nights cold, so cold in fact that water in a pail would freeze if left outside the tent over night."

"The climate then was too cold for growing corn, wheat or ordinary farm crops?"

"Yes, except a few miles north of Lake Huron, where we saw some wheat had been growing."

"For what point were you aiming when you started on this trip?"

"We were aiming for the point where the Mississauga river flows into Lake Huron. The town is called Blind River."

"You did not expect to come back by this same route?"

"No, it would have taken us about a month and a half to come back over the same route that it took us two weeks to go down. The first 100 miles of the trip was through a series of lakes connected by small rivers, and the last 200 miles was entirely river work."

"Did you find the country heavily timbered with pine, after leaving the burned district?"

"Yes, heavily timbered, so heavily timbered that we would travel sometimes all day long before we could find a cleared space large enough to pitch a tent. We saw thirty odd moose, a great number of deer, and several fox. While we did not see any wolves we could hear them howling every night. One of the Indians claimed to have seen a bear, but we did not see any ourselves. The only common bird we saw was near Lake Huron where we saw the ordinary red winged blackbird. No robins, bluebirds, plover, cranes, or owls. We saw a few hawks, one owl, one eagle, and any quantity of wild duck."

"We saw a few swans, two or three flocks of wild geese and lots of loons."

"What can you say about the Indians of your party?"

"The most extraordinary men I have ever met. The guide I had was 21 years old and the other guide was 37. They were peculiar men. When we made arrangements with the Hudson Bay Co., we asked for men who could cook and who could also talk English. They assured us that both these men could speak good English but would

not speak it unless they were obliged to. Whenever we asked them a question and they did not care to answer it, they would look at us with a blank stare, apparently not understanding us, but we found that every time we talked about stopping to have any of our meals they readily understood everything we said. They still retain many of the traditions and superstitions of their forefathers. The Ojibway tribe are peaceful Indians and much afraid of the warlike Iroquois. They still insist there are lots of the Iroquois Indians back from the river in the bush who have never seen civilization, and the Ojibways are very much afraid of them. They also have peculiar ways of telling their brother Indians just what they are doing. Almost every morning when we broke camp they would pile four or five rocks up on a point, possibly put in two or three different twigs and small branches. We afterwards found that this told any following Indians the complete history of our party as to how many there were in it, how many days we were out of Bisco, how far we expected to go and when we expected to get there. It also told them where the good fishing was in that vicinity and what kind of fish they could get."

"Even in these wild streams and lakes you probably found that fish could be caught in some places and not elsewhere?"

"With the exception of pike. We found no place where pike could not be caught."

"Did you have narrow escapes from overturning and any particular adventures of that kind?"

"There was no danger the first 100 miles, while we were in the lakes, but from there on it was practically all fast water, or what is known up in that country as white water. The great danger is in striking a rock that is an inch or two below the surface and smashing the canoe. Our canoe had two close shaves due to my not seeing the rocks in time. We came down one stretch of rapids known as the Forty Mile rapid. The Indians claim that they cover these forty miles in the spring during high water in two hours."

"Did you have any fear that the Indians in the night might attack you and kill you?"

"No, there is no danger of that because they are owned, body and soul, by the Hudson Bay Co. They stand in great awe of it and will not do anything that could possibly get them in wrong with the Hudson Bay Co."

"Is the Indian in that part of the country considered treacherous?"

"Not of this tribe. The Ojibway tribe is considered peaceful. They do not drink whiskey, because it is a criminal offense to sell or give an Indian anything of the kind. Most of them smoke in a pipe the cheapest kind of ordinary chewing tobacco. While they would not paddle when we were not paddling, they would carry anywhere from 125 to 150 pounds in each load over a carry, when all we could carry would be from 80 to 90 pounds."

"Our supplies consisted of bacon, salt pork, desiccated potatoes, corn meal, oat meal, dried prunes, dried apples, dried apricots, rice, tea, coffee and flour. We carried two tents, one for ourselves and one for the Indians."

"You carried guns probably?"

"No, the part of the country that we passed through is one of the Canadian forest reserves and arms are absolutely forbidden. Even the fire rangers themselves are not allowed to carry any arms of any description."

"How far did you travel after leaving the railroad before you reached civilization or another railroad?"

"330 miles. Then we reached a small town called Blind River on the shore of Lake Huron. Thirty miles from the mouth of the river we came onto a lumber camp where eighty men were just starting the winter cut of timber. That was about the last of August."

"Did the Indians communicate anything to you of interest in regard to the country or their trips?"

"No, the trips would have been far more interesting if they had, because without question we would have seen lots of things of great interest if they had told us, but they are very uncommunicative. A queer thing about the Indian character is that they will not speak a word of English while another Indian is near, or while any other white man except yourself is with them, but if you get them alone in a canoe away from everybody else they will talk to you just as well as one of your brother white men would, but immediately you strike camp or come near any other people they refuse to speak a word of English and act as though they had not the least idea of what you are talking about."

"Were they the most skillful fishermen of the party?"

"Well, they know where the fish are all right, but they do not know a great deal about using spoons and things of that kind."

"What is your opinion of Canada as a place for recreation or vacations?"

"I do not think there is any country in the world that can compare with it. I did not realize that there was a place in the province of Ontario as wild as this country is."

"What did you hear of the territory further into the woods?"

"The territory further north has never been surveyed and is a very flat uninteresting country, consisting mostly of marshes and muskeg bogs of no value for agriculture."

"The country through which we went is very mountainous. The river itself in places runs

A young life will grow degree as a part of a fruit-produce by pollen-be endowed any grower fullness of spect his or will find s berries than that plants runners and assuredly is out, as the in the major ing is the only basket as crown b means of ta only in plan of Agriculture insects as l ing beds.

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The Essentials of Small Fruit Growing

By F. E. BEATTY

Plant Selection

A young man who has lived a dissipated and wasted life will give to the world a child weakened in the same degree as its father. A strawberry runner plant is a part of the mother plant that produced it just as truly as I am a part of my mother. If the mother plant has a strong fruit-producing organism and never has been weakened by pollen-secretion or seed production, its progeny will be endowed with these same strong characteristics. If any grower doubts the possibilities of increasing the fruitfulness of plants by selection and restriction, let him inspect his own fields at fruiting time. If he will do this, he will find some plants of every variety producing more berries than others of the same variety. He also will find that plants that fruit the heaviest are making the fewest runners and vice versa. Now, if this is true, and it most assuredly is, it is plain to be seen that a variety soon runs out, as they say, because the unfruitful plants soon are the majority. Another mistake many growers are making is the taking of plants from fruiting beds. This not only hastens deterioration, but it also invites insects such as crown borers and root borers. These insects have no means of travel and are carried from one field to another only in plants. Consult the bulletins of the Department of Agriculture and you will find that they claim that such insects as I have named breed and hibernate in old fruiting beds.

Some years ago I was called to Mississippi by the Secretary of the Strawberry Growers' Association to advise with them regarding insects that were robbing them of their profits. I found their fields literally alive with aphids, beetles and other insects and these were causing all the trouble.

The growers admitted that for years they had been taking plants from old fruiting beds and, in every case except one, the growers claimed that the varieties had run out and were so unfruitful that the business had become unprofitable. A few years before, they were making \$300 to \$500 per acre, and one grower reported a net profit of \$10,000 from 16 acres. This particular grower was still making a handsome profit because he was using plants that had not deteriorated, and he never allowed his fields to fruit more than two years. I examined his fields very closely, but found nothing save perfectly healthy and fully developed plants.

Pruning

Intelligent pruning is just as important in the strawberry field as it is in the orchard. The tip ends of the roots should be cut off before plants are set. Where these cuts are made the roots will callous and feeders will multiply quickly. I have made several experiments by pruning one plant in this manner and setting this pruned plant beside an unpruned plant, and at the close of the season always find there is a great difference in the vigor and growth of the pruned plant over the other.

Every time a plant is relieved of a set of runners the fruiting power of that plant will be greatly increased and will be directed toward building up a fruiting crown. As the pruning process continues the fruiting crowns increase. If this is continued until the close of the first growing season, you will then have mammoth plants, all fully developed with a fruiting system capable of converting the building material into fruit.

The crowns in a strawberry plant may be likened to the cylinders in an automobile. The more cylinders, the more power—the more crowns, the more fruit. When plants are allowed to make runners your plant engines will be one-cylinder, but when pruned and grown in hills every plant will be a twin-six, twelve-cylinder, hitting on every cylinder at fruiting time. Pruning strawberry plants not only increases the crop, but it insures larger berries and berries of better quality than can be grown under any other system. Let the peach growers discard pruning, and what would their harvest be?

Sex is just as pronounced in plant life as in animal life, and the proper mating of varieties must not be overlooked. Through a series of experiments I have made along this line I am fully convinced that congenial mating of varieties is absolutely necessary to insure a large crop of perfectly formed fruit. Pistillate varieties, as a rule, have a longer blooming season than bi-sexuals. Therefore, I find it necessary to mate each pistillate variety with two bi-sexual varieties—one earlier, the other later than the pistillate. This manner of mating insures pollen throughout the entire blooming season of the pistillate. While working out experiments along this line I also discovered that the two bi-sexuals which were used for mating also were benefited by the interchange of pollen. I now mate bi-sexuals just the same as I do pistillates. For some reason the pollen of certain varieties does not perfectly pollinate that variety, while this same pollen might fertilize other varieties. Just why this is so, I am unable to say, but I do know that the crop of each bi-sexual is increased and the percentage of knotty berries is less when several bi-sexuals are set in the same block. After I had worked out this experiment, it was scientifically worked out at the Michigan Agricultural Station, and the result was the same as I found. I follow this same plan in my hundred-acre apple orchard in Idaho.

Cultivation

Cultivation is another very important feature in fruit growing. Just as soon as the plants are set cultivation

begins. I often have seen the cultivators waiting at the end for the plant setters to complete the row. This is done to prevent any unnecessary waste of moisture. Cultivation is very shallow, and is repeated every week throughout the entire growing season, except of course, when the soil is too wet to permit. Our plants are set in check rows, and are cultivated both ways. This leaves only a small space around each plant to be hoed, which greatly reduces the cost and makes it possible to do the work more thoroughly. Repeated cultivation prevents crust, aerates the soil, prevents weed growth, and conserves moisture.

Cultivation also is a means of discouraging underground insects. It is practically a sure prevention of aphids, because these insects are carried from one plant to another by ants, and ants will not work where they are continually disturbed. One cannot over-estimate the importance of thorough cultivation.

Before we had our overhead irrigation system, I succeeded in carrying the plants through a continued drouth that lasted more than ten weeks, simply by cultivating every week. I had the entire fields covered with dust as fine as flour, and the plants showed no lack of moisture. In fact, the soil was so moist underneath the dust that it could be pressed into a ball with the hands. Many growers start out well, but they make a bad finish by neglecting cultivation. Remember, that if weeds once get control, it means more expense to weed the field than it would to cultivate a half-dozen times.

Mulching

In about two-months after we are through cultivating we begin mulching. This work generally begins early in December and sometimes as early as November. We generally use rye, wheat and oat straw. We have used buckwheat straw very satisfactorily. Marsh hay is good, but rather expensive. Stable manure is ideal, provided the heaviest part is not thrown directly upon the rows of plants. When stable manure is used, we throw it from the wagon, making small piles between the rows and the men who do the distributing shake out the straw material, which is put directly over the rows of plants, and the heaviest material is placed between the rows.

Mulching the fruiting bed is very essential. It insures

protection during the winter and early spring, as it prevents the expansion and contraction of the soil, which always take place during alternate freezing and thawing weather. In the spring and summer mulching aids in retaining moisture and also affords a clean place for the berries to ripen upon.

Gun Powder Planting

Editor Green's Fruit Grower: I am a reader of your valuable paper and thought maybe you might be interested in some experiments I have been making in tree planting. I have been reading a great deal of late in agricultural papers in regard to planting trees with dynamite, and as I intended to set out a couple this spring in my garden I concluded to try this system out. In my location I could not get any dynamite but I did secure a piece of fuse from a man who was once employed as a coal miner. I then went to a hardware store and bought some common gun powder. This I put in a round glass bottle about 1 1/2" in diameter and 4" deep. I shoved the fuse down to the bottom of it, cut a slot in a cork to go round the fuse and then plugged the outfit up watertight as per sketch enclosed. I then made a hole in the ground with a crow bar about 18" deep and dropped the bottle to the bottom. I tamped the dirt down around the fuse firmly, touched it off and got behind a tree to await results. Like all good things it was slow in coming. I thought the fuse must have gone out but all at once there was a dull thud and about ten bushels of dirt went into the air and when the smoke had cleared away I found I had a round hole three feet in diameter and about 1 1/2 feet deep. The ground was thoroughly loosened up for fully two feet or more all around the outside of the opening. In this hollow I planted my tree and now I am expecting great results therefrom. A piece of straw filled with fine gun powder or any small tube will answer for a fuse if the genuine article cannot be obtained. I am writing you this short article as I know there are many people like myself who are where they cannot get dynamite readily and do not know how to use it if they could, while gun powder is easy to obtain and nearly everybody knows the nature of it and how it is to be handled, and I think it does the work just as well.—A. J. Saxe, Illinois.

Strawberries and College

Arguing from any process of reasoning possible, strawberries and college are a long way apart in the scale of life. A young man of Polk county, Iowa, has found that they are very closely allied. In fact, he has found in the one the means of enjoying the other. In short, he is earning his way through college largely through his acre of strawberries, says Farmers' Review.

He has been raising strawberries rather extensively now for over five years, and his little plot has been developed to a remarkable extent.

His source of revenue is derived from the sale of early berries, hardy plants for propagation and fancy stock for nurserymen and dealers. His love for the plants has caused him to experiment extensively, and his neighbors affirm that he is a coming Burbank.

A Wild Vacation

(Continued from Page 4)

through solid walls of granite that run up from the river several hundred feet in height."

"How did you happen to select this trip for a summer vacation?"

"It was suggested to us as the finest canoe trip in Canada by a large firm of civil engineers in Sault Ste. Marie."

"How high were the highest rapids or falls that you saw in your trip down the river?"

"There was one called Aubrey falls, 165 feet in height."

"About 60 miles north of Lake Huron we had to portage over a mountain around a place known as the tunnel, and while we were portaging our canoes across this mountain one of the greatest surprises and one of the most pleasing sights we saw was a beautiful little valley with about a dozen farms in it. What made it appear particularly beautiful was that it was such a contrast on coming out from this wild uncivilized place to find such a community as that."

"Was this near the end of your journey?"

"About 60 miles from the end."

"How would you direct anyone so that he could find this place from which you set out on your trip?"

"It can very easily be found on the Canadian Pacific railroad time tables, but you could not possibly take the trip unless you had an Indian guide to take you down the river, because a white man could not get through the rapids alone. If he were able to get through the rapids he could not find his way. I never realized there was a country so near us that was so absolutely wild. We would come around a bend in the river and see some beautiful cliffs of granite running up 500 or 600 feet right from the water. It was one of the most beautiful sights I ever saw in my life. Then we would come around the next bend and that would be even more beautiful, continual surprises all the time. There are the most beautiful reflections in the water up there. One can take photographs in which the reflection is so clear that one can hardly tell which is the object photographed and which the reflection."

"We were tired after each day's paddling and tumbled into camp and went to sleep at seven o'clock, never later than eight. The air was so bracing we could almost taste it, that is one readily notices the purity of the air."

AN APPRECIATION
The Indiana State Horticultural Society being desirous to pay a just tribute to John Chapman, (known as Johnny Appleseed), and to acknowledge with profound gratitude his work as a horticulturist, have written their names on this parchment roll and now deposit it in this crypt, where it will remain as an everlasting testimonial to the memory of the man who brought to this country the apple and taught the early settlers how to grow it.
He did more. He brought with the apple seeds a religion of love, and scattered that as broadly and as thoroughly as he did the apple seeds. It was his hope that the two would grow together. It is with due reverence and deep gratitude that we subscribe our names.
The above was in connection with completions of a monument erected to Johnny Appleseed.

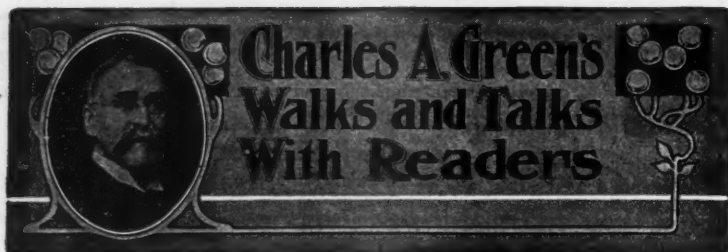


MONUMENT TO JOHNNY APPLESEED

The erection of this monument was made possible through the generosity of Hon. Stephen Fleming, Fort Wayne, Indiana.

John Chapman, better known as Johnny Appleseed, was born in Massachusetts in 1774 and died near Fort Wayne in 1845. He was an apple enthusiast and maintained nursery plots all through the frontier regions of Ohio and Indiana. The trees from these nurseries were sold, traded or given to the early settlers. The remains of numerous Appleseed orchards are to be found yet in certain parts of Indiana and Ohio.

John Chapman devoted his life to the dissemination of the apple and the Indiana Horticultural Society places this rough boulder monument as a suitable memorial to his unselfish and noble work in fostering the early horticulture of our State.



It's Coming

We should all be cheered by the thought that better times are coming. If there are days when clouds overshadow the sky and drenching rains are falling, we can with certainty predict that there will be a change and that sunshine will prevail. It is much the same with human events. The war clouds are overhanging the world but we are certain that they will be dispelled and our hope is they will be dispelled at an early date. Our health may be impaired or that of our loved wife, children or other relatives, but there is reason to hope for betterment. This is an age of marvelous medical advancement, when operations and amputations undreamed of fifty years ago are safely performed. Diet, exercise, pleasant thoughts, cheerful companions, all help to promote health. Our finances may be disturbed today but through good management entanglements of this nature may be overcome. Management is everything. Good management cannot fail to conquer in the end. Good management in the household is as necessary as good management in the field.

On Buying Land

Do not buy poor soil. It is cheaper to buy fertile land than it is to buy poor land and then be to the expense of making it fertile. You can buy fertilizers already existing in the land cheaper than you can apply fertilizers to poor land in order to make it fertile.

Some soils wear out more easily than others. Sandy soils do not remain fertile so long as those more clayey, but hard clayey soils are not desirable. The best land is a combination of clay and sand or gravel known as sandy loam or clay loam.

If you can have your choice, buy land in a fruit growing district, since fruits are means of revenue, even though you only have a few acres of orchard or a small patch of strawberries, raspberries, blackberries, currants and gooseberries.

Land that will produce good fruit will generally produce good crops of corn, wheat and other farm crops.

Hay is a profitable crop and one of the most profitable in New York state, but hay cannot be produced largely on poor or impoverished soil. I know of no crop that will show such marked improvement by the application of a little fertilizer, either barnyard manure or commercial fertilizers, than the hay crop.

It is cheaper to buy upland, rolling land, that drains itself naturally than to buy low lands and attempt to reclaim them by drainage. In buying a farm I avoid low lands adjacent to swamps. Many people are afraid to buy hilly farms. While I do not favor numerous steep hills and side hills, I was born and brought up on what might be called a hilly farm, but more properly the farm was rolling, shedding water naturally, therefore I am not afraid of buying a farm with a few hill sides or hill tops, which I have found to be the best locations for orchards.

Do not forget that farms near railroad stations, churches, schools, villages or cities are more valuable than those more distant. Examine the roadways leading to the farm you are thinking of buying. If the roads are improved this adds to the value of adjacent lands.

Old Soil not Worn Out

We hear remarks about the soil of the eastern and middle states of America losing its fertility after having been cropped for 50 or 100 years. The soil in China has been under cultivation thousands of years and yet this same soil is now producing wheat at the rate of 40 to 60 bushels per acre, or fully twice the yield that we get from wheat in this country. In France, England and in Egypt we have similar conditions where soil has long been cropped and still

yields larger crops than in this new country of ours. Here is evidence that if our soil becomes less productive it is not owing to long cultivation but to lack of management in fertilizing the land in making the most of our home fertilizers. I will not say barnyard manure, because this is only one of several. The waste of fertility from our barnyards and stables each year over this entire country amounts to an appalling sum, embracing over \$50,000,000. Such waste of fertility does not occur in China or Egypt or France, England or Germany.

Higher Prices for Daily Papers, Monthly Magazines and other Publications

The expense of publishing a monthly periodical like Green's Fruit Grower would surprise most of our readers. The expense is most largely labor and paper. The paper on which Green's Fruit Grower is printed is purchased by the carload, each carload costing several thousand dollars. During the last few months the price of white paper has increased nearly one-half, or in some instances nearly double what it was before. Not only this, the ink used in printing, the wires used in wiring the pages together and the price paid for the labor have all increased.

During the past years the prices of publications have declined. When I began publishing nearly forty years ago, Green's Fruit Grower was the only publication of its kind and the price for subscription of this and other publications was nearly double that asked at the present day.

Here is an illustration of the dilemma in which publishers of this country are placed. The question is how are they to meet expenses in the years to come? There seems to be only one answer and that is that the price of publications must be increased. The price of publications certainly cannot go any lower than they are at present. If readers of various publications have a desire to help in this crisis they can do so by renewing their subscriptions promptly. This prompt renewal is likely to be profitable to the subscriber himself, owing to the fact that those who delay are likely to pay more for their subscriptions in the months to come.

Mothers Day

It was a happy thought of Miss Anna Jarvis when Mothers Day had its inception in her mind. Mothers Day is becoming a popular institution. It is being observed in the churches and by the press. There is no way by which you can better secure the attention of a man than by alluding to his mother and her many sacrifices for his welfare. No matter how much you and I may have done for our mother and our father during their lifetime, after they have died we will ever wish that we had done more for them, for their comfort and welfare, assurance of affection, and that we had more freely expressed our appreciation of their undying love and care during their lifetime.

There is never a time in the life of an individual when she or he so much needs attention and consideration as in old age. For an aged individual to change her habitation and remove to strange scenes, strange neighbors and companions, is serious and regrettable. One of the saddest things connected with old age is the feeling that every act of the aged person is apt to be watched and criticised, and if there are any signs of a mental or physical decline that this should be noticed in words or actions. This is an age where youth is predominant and where age is inclined to be thrust into the background. It used to be otherwise. Time was when the counsel of the aged was highly respected as it should be, because with age comes wisdom in most instances.

Lawyers

"Houses are built on fools' heads," says a French proverb. How many millions of dollars have been wasted on a few inches or a few feet of boundary line between two farms. Not only this, but how much valuable time has been wasted by the litigants and by the men who must serve on the jury. Lawyers are not always to blame for the folly of those who employ them. My lawyer ever advises the settlement of a suit, but all lawyers are not so conciliatory. This recalls the anecdote of the farmer who asked the lawyer what he would do if a bull leaped over the fence and gored his peaceable cattle. The lawyer replied: "Sue the man immediately for damages." "But the bull was yours," replied the farmer. "In that case," replied the lawyer, "I should repair the fences and say nothing."

Little money is made through law suits, but thousands of fortunes are lost by them every year. I once sued a man who owed me \$500 and who refused to pay. I beat this man at law, but as he was heir to a large fortune he carried the suit through several courts and I found in the end that I had lost more than the \$500 and the interest thereon which I had secured as the result of the suit.

An Italian farmer said that no good lawyer ever goes to law himself.

Good Advice from an Orator

A famous actor tells me that he has been greatly aided in his work by the advice given him by a celebrated bishop. This advice may be helpful to the readers of Green's Fruit Grower who may be called upon to make a little speech at some period of their lives. The bishop's advice is as follows: "When called upon to make a speech or to say something in public, my advice is that you stand up, talk up, and then shut up."

How He Lost \$40,000

Two friends of mine were engaged in an enterprise which required considerable capital. They were reasonably successful on the start, but after a time their business began to decline and they found they were losing money. These men were courageous and enterprising, therefore they kept on and on until they had lost \$40,000. Then they quit and abandoned the business utterly.

I hear of another case of a man at Saratoga Springs, who was successful in business there until the cessation of the races and of gambling schemes became effective. These changes affected his business seriously and he found that he was losing money each month and each year, but he had grit, probably too much, therefore he continued until he lost every dollar he owned. His wife had an estate of her own which this man induced her to place in this losing business, and after a few years the wife's estate also was lost.

What is to be learned from the above experience? It seems to me that we should learn to cut short the business which is unprofitable before our entire fortune is wasted. We should have enough discretion or discernment, or what some call horse sense, to decide whether there is any hope for continuing the business under unfavorable circumstances, and if there is no reasonable hope, dispose of the business and close the doors.

While I do not advise the shifting or moving of people from one part of the country to another, which is continually occurring and is the source of large loss to many people each year, I am fully persuaded that there are sections of even the Empire state which are so inhospitable and so unattractive for farming and fruit growing that the residents should not delay in moving away to better fields. I often ask myself why an enterprising man should spend his life on the stumpy and rocky farms such as often can be found in certain portions of Massachusetts, New Hampshire, Vermont and even in New York state in the Adirondack regions, where the seasons are so short corn will not ripen and where frost occurs almost every month of the year, and where the soil is thin and unproductive. I have seen men in such locations spending \$50.00 an acre in getting out the stumps and blasting the rocks when they could buy superior land suitable for fruit culture and other farm products in other localities for the price per acre which they are spending in clearing the soil in unfavorable localities.

Farming in America as Compared with Farming in Europe

Farming in most sections of Europe is not a dignified calling owing to the fact that those who cultivate the land are apt to be poverty stricken tenants, whereas in the United States of America the farmer in many instances is a capitalist, owning his land, while in Europe the farmer seldom owns the land he works.

In this country a farmer often makes a fortune at farming, but the European farmer as a rule has no hope of earning more than enough to support himself and his family, though practicing the closest economy.

The average farmer of France, England, Russia and other European nations has not the intelligence that American farmers have, not having had the opportunities for education and travel.

While the average size of the American farm may be 100 acres or more, in Europe the average size of the land tilled by an individual may not be over one acre or at the extreme five acres. When I was passing through France I saw in the distance slopes covered as though with broad belts or ribbons of various colors. I was told that each narrow strip of land was in some instances an entire farm worked by one tenant farmer. It would take several of these strips to make five acres. Labor has been in the past poorly paid in Europe. Labor has not been considered a serious affair, thus high culture and high fertilizing is practiced abroad, so that the yield per acre is far in excess of that in this country.

In the United States fruit growing can be profitably pursued over a large extent of country, but not so in Europe where fruit growing lands are far less frequently met with than in this country. America seems to be more nearly a place where fruit grows spontaneously than any other country of the world.

Thoughts on Floods

As we stand on the Genesee River bridge and see the plunge of the surf and the press of the torrent, we are inclined to ask what is the source? Where does all this volume of water come from?

Some will reply that it comes from Black creek, Honeoye creek and other similar tributaries of the Genesee river, but I feel safe in claiming that the larger part of this flood, which is now menacing our beautiful city, comes from the small rivulets, which appear harmless as we see them trickling along the sides of the highways or in the sluices of the fields, but which in the aggregate are the main source of our annual floods, but the source of these large tributaries also is from rivulets.

When I watch the waste of water in the Genesee river and in imagination see what might be accomplished if the river were harnessed by a dam at Portage, I am depressed and obsessed with the thought that if this possible storage of power had been located in some of the western states it would long ago have been made available by manufacturing interests of the city.

When I look upon the flood I am reminded of another subject and that is the accumulation of wealth. This accumulation comes something as the rivulets trickling through the fields. Financial success sometimes comes through a few large streams of revenue, but in a majority of cases the rivulets must be depended upon for our financial success. We must look to the rivulets of economy, industry, sticktoitiveness, watchfulness, patience, and often of suffering.

Strange Lawsuit over Sale of Horses

A Rochester man sold a spirited team of horses to a man in New York city for \$3,000. The buyer said he need not ship the horses until he had received his money. On receiving full payment for the horses he shipped them on to the buyer and supposed the deal was closed, but soon after the seller was sued by the bank on which the buyer of the horses drew a check as cashier of the bank. This lawsuit was carried through various courts and always decided in favor of the seller of the horses, but in the end the seller lost nearly all that the horse sale amounted to, since he had to pay his own lawyers' costs and his expenses for traveling, etc. The claim made in this suit was that the buyer of the horses did not pay for them with his own money but paid for them with the money of the bank, which he had no right to use for that purpose.

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The Fruit Outlook for 1916

From the Chamber of Commerce of the United States

The outlook as a whole for fruit, with the sole exception of peaches, is far above the normal, it is pointed out there still remains to be encountered the wet days of June, and the so-called "June drop" occurring in many kinds of fruit, particularly in apples.

One of the compelling causes this season of the high condition of fruit is said to be the increased attention paid to its culture, especially in pruning and spraying the trees. It is now generally recognized among all the commercial growers of fruit, according to the committee, that success is impossible without close attention to both of these methods, and that the results from their use far outstrip the expense involved.

Should be Good Small Fruit Year

The yield of strawberries, blackberries, and other small fruits, promises this year to exceed all records, the committee reports. This favorable condition is wide-spread wherever these fruits are grown, and this practically takes in most of the United States. There are scattered reports of damage by dry weather on the eastern coast of North Carolina, of some slight damage by cold and frost in different sections, of too much rain in California at critical periods according to the committee, and of too much dry weather since, but in general the forecast is for an abounding yield. As a matter of fact, shipments from territories as far north as Missouri are already very heavy.

A similar story is that of cherries, of which the general product is much more widespread and of greater importance than is said to be generally realized. In some scattered sections in North Carolina, Arkansas, Illinois and Virginia there was some damage by cold early in the season, but as a whole the outlook is for probably the greatest production in many years.

Cherries are of much commercial importance in some sections, particularly in portions of Washington and California, and some sections of the Middle West. Cherries are grown successfully as far south as Florida and as far north as Minnesota, or practically within the limits of the United States. They are shipped largely from some sections—particularly from the Pacific coast.

Largest Apple Crop Promised

The apple crop, the most important of all fruits in its commercial value, has the promise of a very large production, the committee declares. This good condition is wide-spread, with of course exceptions here and there, as it was a little too dry in California in some spots, a little too cold in a few sections, and there was damage by frost in some portions of West Virginia and Pennsylvania, and also in Oklahoma and Kansas. As a whole, however, the National Chamber Committee believes, the outlook is for one of the largest apple crops ever raised.

The outlook for citrus fruits is said to be very cheering. Rain is needed in Florida, according to these reports, though the trees for the new crop are blooming well, while in California, Arizona and Texas there is the promise of a very heavy yield. Likewise in California the apricot crop, one of local importance varies in its promise of from one-half to three-quarters of a normal production.

Outlook for the Peach Crop

The yield of peaches will unquestionably be much less than last year, owing to very great damage wrought in the spring by severe cold and frost. Peaches, it is explained, are not only extremely sensi-

tive to cold, but are most previous in their spring awakening, and are consequently constant victims to the early and late frosts and freezes. There will practically be no production of any moment in either Kansas or Oklahoma, the committee believes, and none in New Mexico throughout the Pecos valley, which is the great peach-growing district of that section. As usual, the damage is largely localized; peaches will be completely killed in one portion of the state, and practically unhurt in another. In Arkansas, for instance, in the northwestern section they were very badly damaged, the committee reports, while in the southern portion there will be from 40 to 60 per cent of a normal crop.

These same inequalities of local damage and local promise of yield are to be found in Georgia, Texas, Alabama, and in Missouri. In Missouri through the central counties along the Missouri river and in the extreme northwest the fruit was very badly injured early in the spring, but in the south-central section—in Howell and Oregon counties—there will be a normal crop is the information furnished by the committee. Much the same story is true also of North Carolina. In Iowa there will be almost a complete failure, the committee reports, and only about half a crop in West Virginia.

Any estimate of the comparative production with the previous years in peaches is said to be of no avail by the peculiar property which this fruit possesses of resurrecting itself later in the season after the crop is supposed to have been destroyed. As a matter of fact, there is nothing so difficult to estimate in advance as the probable yield of fruit. It is not possible to get the same intelligent idea of its condition, the committee goes on, as may be gathered from the observation of such staple crops as corn, cotton, wheat and the like, and it takes much experience and often expert knowledge to gain a correct idea of the true condition.

The condition of peaches seems to improve progressively from the central West to the East, but as a whole is very good in Michigan and Ohio, somewhat better in Pennsylvania, and most excellent in New York, Delaware and Maryland. Peaches are a fruit whose yield most of all effects the volume of the canning industry.

The condition of pears is extremely spotted throughout the country, being like peaches very poor in Kansas, Oklahoma and most of Missouri, good in the eastern states, and very good in the central West and on the Pacific coast. The outlook is also for a fairly large crop of plums this year, and these have their principal commercial value in the Pacific Coast States for use as prunes.

Commercial Value of Fruit Crops

While definite statistics as to the com-

mercial fruit crop as a whole are almost impossible to get, the committee says, the best estimates are that in a year like that which now seems ahead of us, the growers of fruit for commercial purposes will probably receive for their production something like \$400,000,000. Below are some figures offered by the National Chamber committee of the production of apples, the leading fruit:

1915	76,000,000 Barrels
1914	84,000,000 Barrels
1913	48,000,000 Barrels
1912	78,000,000 Barrels
1911	71,000,000 Barrels
1910	47,000,000 Barrels

There is a fairly large export of apples both fresh and in their dried state, the committee reports. The estimated farm value of the apple crop in 1915 in round numbers was something like \$145,000,000. In years of large yields, the shipments from southern California alone of citrus fruits (oranges, lemons and grapefruit total \$45,000,000). In 1915, which was a year of large production in peaches, there were something like 43,000 car loads for the entire United States, or approximately 64,000,000 bushels, with an approximate farm value of \$54,000,000. The production of peaches in 1914 was 54,000,000 bushels.

Of pears in 1915 the production was 11,000,000 bushels, in 1914, 12,000,000 bushels, the farm value of the 1914 yield being approximately \$10,000,000. It will be seen by a comparison of the different years that there is a very great difference in the production of all kinds of fruit, the committee points out. This difference is said to be due largely to favorable or unfavorable weather, and in a much less degree to the ravages of insects. Of the production of apples in 1915—76,000,000 barrels—it is estimated that 43,000,000 barrels were sold from the farm, 6,000,000 barrels used for cider, 15,000,000 barrels consumed on the farm for human food, and 12,000,000 barrels wasted or eaten by live stock. The raising of fruit as a commercial proposition, it is said, grows in importance each year and in an increasing number of sections throughout the country. It forms the principal source of revenue of the inhabitants in many parts of the Union.

Note to Editor: The Chairman of the special committee of the National Chamber advises that since the date of the above report (May 6) there has been severe damage by frost and freezing to fruit in most of the rocky mountain states, the principal damage being in southern Idaho where nearly all the fruit was practically ruined, in Utah where half of the growing crop was destroyed and also severe damage in portions of eastern Oregon and eastern Washington.

How and When to Apply Lime to Soil

Some field tests may be used to ascertain the need of liming. Soils with a light color, gray, grayish brown, or yellowish in shade are usually in need of lime and wherever serious difficulty is experienced in growing good crops of clover or alfalfa, lack of lime is strongly indicated.

If in doubt, the litmus test gives a reliable indication. It may be made as follows: Obtain a ball of wet soil about the size of the fist, break it open and insert a double thickness of blue litmus paper (obtainable at any drug store). Press the ball firmly together and allow to stand as much as half-hour. If at the end of this time the paper in contact with the soil has distinctly changed to a pink (Continued on Page 9)



This photograph shows the thorough cultivation of a western New York orchard near Sodas, N. Y. Photographed by A. H. Pulver. This orchard is a heavy annual yielder of superior apples.

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Fruit Helps

By Prof. H. E. Van Deman

Thinning Overloaded Fruit Trees

There are several reasons why thinning pays. The most important one is, that it causes the fruit to be large and well flavored instead of small and poorly flavored. It is scarcely worth while arguing about the difference in value between large and small fruits of the same variety, either for market or home use; and I would not do so if there were not so many who continue to grow so much of the latter kind. One big Baldwin, Jonathan or any kind of apple is worth more than twice as much as two of half the size. In actual net profit it is worth fully four times as much whether eaten or sold. The same is true of pears, peaches, plums and all other fruits. When there is a glut in the markets it often occurs that small and inferior fruits will not sell for enough to repay the cost of gathering and transportation.

Now if the trees that bore these small, half or less than half-developed fruits had been stripped of half or three-quarters of them when they were about the size of marbles the remaining ones would have grown to weigh nearly as much as all of them and would have been worth much more.

There have been many experiments made to obtain positive evidence as to the profit or loss of thinning fruit and what proportion should be removed. Extensive experiments of this kind, were made by Mr. A. T. Hatch, principally upon peaches and pears. I heard him state that he tried leaving the fruits different distances apart; some being just as nature had placed them, some three, four, five and six inches apart and so on up to a foot. He said that he had finally decided that for these two fruits about six inches gave the best results. The open hand of the workman was given them as a measure by which to space them. In New York, Connecticut, Michigan and Georgia there have been such tests with apples, peaches, pears and plums. Only a few persons have tried the plan upon grapes, except in house culture. In every case it has paid. A few have thinned big trees of Baldwin, Esopus and other apples, carefully charging all expense of labor and crediting the trees with the fruit sold. This having been done in comparison with adjoining trees that were not thinned, and of which records were kept of fruit sold, it was found that there was a very decided balance in favor of thinning. If this will pay on a few trees it will pay on many. It is purely a matter of business judgment as to whether it should be done or left undone; just as a farmer thins his corn to two or three stalks to the hill and has big ears, or lets five or six stalks stand to make fodder and nubbins. Many of the most progressive fruit growers have passed the experimental stage of the business and practice thinning their growing fruit with as much certainty of profitable return as they do tillage or any other part of the business.

Night Lamps to Trap Insects

I have just read on page 21 of the May issue of Green's Fruit Grower a short article entitled "Night Lamps Destructive to Insects." I think that man is on the right road. About twelve years ago we had the army worm badly near Montreal, Canada, so sprayed all fruit trees. In one week on three acres we picked up 95 dead birds of all kinds. We opened some of them and found the poisoned worms inside. Since then I have been studying the matter and I believe too much poison is being used. The article mentioned above says that one of the objections to the use of night lamps is that some helpful insects are also killed. But when poisons are used they are eaten by birds, bees, and in some instances people. I have seen truck farmers and gardeners putting poison on fruit trees, and all kinds of truck under the trees going to market. For the last three years I have been sending letters to different parts of the country about night lamps. Most of the trouble from insect pests comes in the night when we do not see them. I notice a friend asking in Green's Fruit Grower how to get rid of the large white grubs in his strawberry bed. The night lamp will do it, and will also get the elm tree beetle, and most of the things that attack fruit trees except the scale.

Where anyone can use electric light for the trap, the same wire might be used for heating the orchard with electric heaters, or for starting the smudge pots, as it takes too long to get them all started in time by hand. The best of it is they would all start at once of themselves as soon as it was cold enough. One trouble with night lamps has been the getting up at three o'clock to put them out. I have a lamp that can be set and it will go out of itself when you want it to. Below is an account of how it was tried in California last summer:

A Light to Trap Moths

The best ranches of Southern California are protected from the ravages of the night-flying moths, mostly cutworm moths, by a novel light trap which is set up in the fields; a single trap capturing from 1,500 to 7,000 moths in a single night. One company near Oxford has eight such traps in use and during the past season the results were equal to the highest expectations.

The device is of reasonably simple construction, being a powerful light enclosed in a glass globe and suspended over a shallow galvanized iron pan containing oil. The insects, flying against the globe, fall into the pan and perish in great numbers. As a large proportion of the moths are females, carrying great quantities of eggs, the results of a season's catch can easily amount high in the millions. The light is furnished by acetylene gas, a tank being set below the frame carrying the tank, though an electric light has been used with equal success.

Best Soils for the Northern Spy Apple

Written for Green's Fruit Grower By Earle William Gage

The Northern Spy is one of the most exacting trees to grow, as regards soil requirements. High quality fruit determines the price, and this quality would include fine texture, juiciness, and high flavor. To insure these the soil must be moderately heavy, and for the first two qualities, the soils adapted must have heavy silt loam or light clay loam underlain by silty clay loam. This will retain moisture sufficiently to be classed as a moist soil, yet not too heavy as to be ill-drained if surface drainage be inadequate. The soil should be moderately fertile in organic matter.

The fact that the Northern Spy is a red apple makes it imperative that the color be well developed, and the skin free from the greasy tendency. The habit of the tree growth of this variety is such as to require careful attention on the part of the grower. Its tendency to grow upright seems to be accentuated by too clayey soils, if well enriched, and such soils tend to promote growth faster than the tree is able to mature well. The Spy from sandy soils, while possessing good color and a clear skin, is often unsatisfactory in texture and flavor, especially if the fruit be held for a long time in open storage. The commercial keeping quality is usually inferior to that of the Spy grown on heavier soils in the same communities. Therefore, the soil requirements of this variety are decidedly exacting, and are best supplied by a medium loam underlain by a heavy loam or light clay loam; that is, a soil as heavy as can be selected without incurring the danger of inferior drainage, for a poor-drained soil should in no case be used.

It is not a good policy to plant Northern Spys on a soil lighter than a very heavy fine sandy loam, underlain by a light clay

loam, or possibly a heavy loam. Good elevation and good air drainage are also very essential with this variety.

Orchard Cultivation

Says W. Dreher, Macdonald College in The Canadian Horticulturist

Stop cultivating and sow a cover crop before the season's growth stops in mid-summer. From that time trees begin to get ready for the winter by ripening their wood, consequently all work tending to promote growth must stop so as to allow the trees sufficient time to mature properly. By means of cover crops the roots will be protected from frost. The ground will better hold the snow and allow its water to penetrate instead of washing off the surface soil in spring rains. These requirements, together with that of checking the growth of the trees in summer, are fulfilled by sowing a crop about the middle or end of July, which by winter will cover the ground, forming a mulch of vegetable matter. Besides these advantages it benefits the trees by improving the physical condition of the soil and enriching it in plant food when plowed under to form humus early in spring.

What Kind of Cover Crops

It remains to be determined what crop to sow after cultivation has ceased. This is a local question, and the fruit grower will have to use his own judgment for the choice. The experimental farms, however, have experimented with a number of crops and can tell the advantages that each will give in certain soils and under given climatic conditions. From these the grower can choose those he thinks will answer the purpose best. He can also do that from his own field of crops of which he possesses knowledge and with which he has had experience. Clovers, peas, vetch, oats, rye, buckwheat, or rape may be used. The clovers, peas or vetch are to be preferred as they enrich the soil in nitrogen. Crimson clover at the rate of twenty-five pounds per acre or vetch at the rate of one and a half bushels per acre give two of the best cover crops. These are sown broadcast and harrowed in at the last cultivation early in July.

Keeping Goats

A small flock of goats on many farms, would pay as well as other farm stock. Goats are healthy animals and free from disease, and are cheaply kept on what most of the other farm stock would refuse to eat.

Grow the Blackberry

Written for Green's Fruit Grower By F. E. Simmonds

Blackberries thrive in almost all soils, but better yields are obtained from rich, moist soils rather than light sandy soil which is lacking in moisture. Select the variety that will withstand the most severe winters, that is the most free from infection, the most productive and at the same time the most profitable. Each variety has some point of merit and the person who plants and cultivates can do his own selecting, whether for family use or for market.

The blackberry is one of the oldest and most abused of all berries. Often it is planted in some out of the way place, or along the fence row, where nothing else will grow, and where it is impossible to cultivate. If you want to cultivate blackberries for profit, select a tract of land almost level, with deep, black loam. If not already rich, manure heavily with litter from the barn before setting the plants. Set in rows six feet apart and from two to four feet apart in the row. As soon as the tract is set begin cultivating, keeping the field free from weeds and all kinds of grasses, especially those that make a sod. The first year after planting it is advisable to plant corn between the rows of blackberries but thereafter plant nothing, as the berries need all the room. Start cultivating early in the spring of the second year and continue until the berries are about half grown, then cover the ground with six to ten inches of straw and leave it on till the berries are gathered, then remove the straw and continue to cultivate until the ground freezes. When the new canes attain the height of two to three feet, they should be clipped, causing them to grow forked, thus making them more productive.

Remove the old canes as soon as the crop of berries is off, or in the following spring, as best suits your convenience, and at the same time take out all the small, unhealthy canes, leaving three or four vigorous ones to bear. Whenever you discover any young bearing canes, the leaves of which are tinged with red, immediately destroy them root and branch, as this is rust and if undisturbed will eventually destroy the whole field.

Grow blackberries for home use; there is no healthier fruit.

Grow blackberries for profit; there is no other berry that will yield greater returns for the time spent on it.

Plant them, cultivate them, and give them a chance and they will do the rest.



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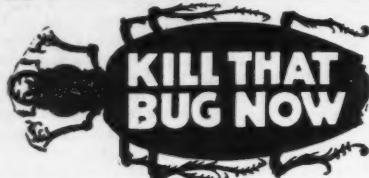
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Notes from Green's Fruit Farm

Prices for Strawberries

We have reported in Green's Fruit Grower extraordinary yields of strawberries. In one instance we with some hesitation announced an instance where \$500 had been received as net profit for one acre of strawberries, cautioning our readers not to anticipate such remarkable yields, for if they did they would be likely to be disappointed.

Now we have a report, published in The Country Gentleman, where a strawberry grower received 16 cents per quart for the fancy strawberries and 12 cents per quart for the seconds or culls. It is stated that the man who bought these berries resold them from his grocery at 20 cents for the selected berries and 16 cents per quart for the second class. The net profit on one-tenth of an acre of this man's strawberries was \$87.50, which would amount to \$875 per acre if the yield per acre was equal to that of one-tenth of an acre. It is not safe to assume that the same result could be secured from an acre or from ten acres that could be secured from one-tenth of an acre, for the smaller piece of ground could be abnormally fertilized with barnyard manure or with chemicals and could receive the highest cultivation under the most elaborate system of allowing every inch of the ground to be covered with plants 6 to 8 inches apart, all securely covered during the wintry months.

Nevertheless I am a great friend of the strawberry, which came to my assistance and filled my pockets with jingling silver at a time of my life when assistance was greatly needed. I know of no other method by which a poor man can secure cash as readily as through a small plantation of strawberries in his garden.

Three Inches of Rain

From May 16th to May 20th there fell on the farms about Rochester, N. Y., where Green's Fruit Grower is published, three inches of rain. While such a downpour as this, which if there were no evaporation

or leakage would fill a pan three inches high with water, does not seem to be a formidable affair, it is really what is called in many parts of this country a cloudburst. Immediately the Genesee river and its tributary streams were flooding the country and threatening the city with disaster. At Green's Fruit Farm's little rivulets that carried no water during a large portion of the summer season were turned into creeks or small rivers, flooding tracts of land just recently prepared for planting.

When three inches of rain falls on one acre of ground, it means that 1800 barrels of 45 gallons each have fallen upon that small piece of land. The weight of these three inches of water would be 339 tons per acre. If the storm covered 1000 acres the weight would be 339,000 tons of water that had fallen from the clouds. This is something remarkable to contemplate and illustrates that marvelous provision of nature, which provides for the lifting of water from the lakes and oceans into the clouds through evaporation, and by the beautiful clouds carried over the continent by gentle breezes or high winds, providing for the irrigation of the fields without cost to man. If our farmers and fruit growers were compelled to pay for this irrigation that is brought about by showers in the eastern and middle states they could not conduct their enterprises with profit.

Rust on Blackberries

A subscriber to Green's Fruit Grower asks information regarding this disease. It is a fungous attack. It is most prevalent on old, abandoned plantations or on plantations on low, wet or undrained soil. This rust is liable to spread from one bush to another, therefore when you discover a blackberry plant having a yellowish, rusty, fungous growth on any of its branches you should dig it up and burn it without delay. If you have a plantation badly infested, dig it up entirely and burn the refuse and do not plant blackberries again at once upon the same soil. At Green's Fruit Farm where the blackberry plants receive good cultivation and where the soil is well drained, we are not troubled with this disorder.

Horse Surgery

At Green's Fruit Farm we have use for twenty or more horses. When the busy season was approaching in April, one of these horses was taken sick and a veterinary was called to attend him. This veterinary inserted a tube through the mouth and throat to the horse's stomach to relieve the stomach of gas. After inserting the tube as far as possible, he lit a match and applied it to the outer end of the tube and was surprised not to see a flame appear. Not seeing the flame, he told our foreman that in order to relieve the animal it would be necessary to puncture the stomach and insert a tube through the body of the horse, which was a risky operation and was never done without the consent of the owner of

the horse, as possibly the horse might die under the operation. The puncture was made through the abdominal wall into the stomach, after which a lighted match was applied to the outer end of the tube, when a bright flame ensued, caused, as the veterinarian claimed, by the gas escaping from the horse's stomach through the tube. This operation was entirely new to me. The operation was successful in every way and at the end of a week or so the horse was at work as usual. All of which indicates that veterinary surgeons are progressing in their work almost the same as surgeons for human beings.

Raise Plenty of Grapes

Where grapes will live these also may be set between the trees and trained over a rough trellis, says American Cultivator.

The secret of good grapes is proper pruning, and this is easily done, but a grape run riot will usually bear grapes, although not of so good a quality. Concord, Delaware, Wards, and Moore's Early will grow in quite a cold climate. I know of a Delaware that adorns the south side of a house running up over a porch roof, and pruned only enough to keep it where it can be handled to lay it down in the fall to cover it. There is no science in its pruning, but it bears bushels of grapes. This is in forty-five degrees N. latitude. Where a trellis is used the laying down for winter is very simple, consisting merely of removing the supports and laying trellis and all upon the ground.

When once one becomes accustomed to plenty of fruit it would be a great privation to do without it. It is healthful and pleasing and few people feel able to buy very much of it, although much more is purchased than used to be years ago. The better plan is to raise plenty of it, then one is sure of it and there is always a ready market for all one does not want oneself.

Dogs Carry Disease

Of the diseases carried to stock by dogs, the foot-and-mouth disease is probably of the greatest interest at this time. In this case the dog acts as a mechanical carrier of infection. The dog which runs across an infected farm easily may carry in the dirt on his feet the virus of this most contagious of animal diseases to other farms and thus spread the disease to the neighboring herds. In infected localities it is absolutely essential, therefore, to keep all dogs chained and never to allow them off the farm except on leash.

There are, however, many other maladies in the spread of which the dog takes an active part. In Bulletin 260 of the United States Department of Agriculture, "The Dog as a Carrier of Parasites and Disease," it is pointed out that rabies, hydatid, ringworm, favus, double-pored tapeworm, round worm, and tongue worm are often conveyed to human beings in this way. It occasionally happens also that the dog helps fleas and ticks in transmitting bubonic plague or the deadly spotted fever.



Photograph of what I call a hedge row of apple trees. At Green's Fruit Farm we plant apple trees as shown in the photograph for testing various varieties. These trees bear at an early age and continue to bear good fruit, though so closely planted, for twenty years, after which time every other tree should be removed. The reader can realize how interesting such a row of apple trees is, each tree bearing a different variety.

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Co-Operation in Selling

Owing to geographic location, some important apple-producing States have the natural advantage of an early season. It would be folly for such States not to profit by that advantage. It is possible for growers so situated to leave their crop on the trees until the period of greatest movement, and frequently in years past they have suffered great loss by doing so. The Southern States of the apple belt should begin early and market the greatest portion possible prior to the period of greatest movement, and thereby avoid competition with the producing areas of the northern belt. On the other hand, States that go to market latest should be in no hurry to rush the markets during the period of greatest movement. In brief, the crop should be distributed throughout the longest time possible, cold and dry storages being judiciously utilized for conservation, says Ind. Farmer.

Small towns outside of the apple belt are often poorly supplied, even in large crop years. Growers of the Middle West have taken advantage of this condition by going to such towns with cars of apples and selling on the track. In order to succeed with this method the shippers should know conditions of supply and demand in the town selected, ascertain the railway and township regulations controlling track sales, and precede delivery of the car by judicious advertising. The mayor can give information as to whether a license is required, and the railway agent as to whether track sales are allowed.

In so far as the apple grower is concerned, co-operation in distribution and marketing is highly commended as an economic system for securing judicious handling. It would be impracticable for growers to organize upon the eve of crop movement, because disaster would likely result as the consequence of too little time for perfecting business arrangements. However, in communities where co-operative packing and selling agencies are operated, the growers should do all possible to strengthen such exchanges with their patronage and counsel. The disloyalty of members is the chief element of failure in co-operative circles, and apple growers are strongly urged to stand by their associations as the best way to solve the problems that are common to all.

Long Prosperity

That the prosperity which is now becoming manifest in this country will continue so long as the war lasts and for years after peace has been established is the opinion of most thoughtful people. Typical of the opinions that have been expressed by many on this question is the following statement, recently made by J. Ogden Armour, the Chicago packer:

"America is rapidly rising to an unprecedented prosperity, a prosperity which would have been inconsiderable a year ago and which will be enduring. It will be boom-like for, say, three years and should not be affected by a termination of the European war within that time.

"The idea that cessation of European hostilities must affect business conditions in this country adversely, I believe, is erroneous.

Relation of the Government to the Marketing Problem

(Continued from Page 3)

laws involved. For example, a mere fiat that eggs should not stay in storage longer than thirty days or ninety days will not solve the problem of the storage, marketing, and distribution of eggs.

Finally, the question may be asked whether Government might not very properly function in the gathering and quick dissemination of information regarding perishable products which would be helpful to producer and consumer alike. The United States has developed one of the best weather services in the world. Its daily weather reports, obtainable now in every little hamlet and farm home, are of incomparable value to agriculture, to commerce, and to all industries. There has also been developed a most thorough and efficient system of crop reporting. Some preliminary work has been done by the United States Department of Agriculture in this informational marketing field. This work, to be effective, must necessarily be expensive, and it is a question whether the lack of knowledge on the part of those who most need it will not keep them from knowing how to use it. The knowledge will come, however, and a combined climate, crop, and market informational service is something that should be looked forward to in the consideration of any questions having to do with the relation of Government to the marketing problem.

How and When to Apply Lime to Soil

(Continued from Page 8)

color there is positive evidence of acidity and it may safely be assumed that benefit will follow liming. Of course it is best to make a number of tests in different parts of the field and the subsoil should be examined as well as the surface. The practice sometimes recommended of placing a piece of filter paper between the litmus paper and the soil renders the test of no value. The litmus must come in direct contact with the soil.

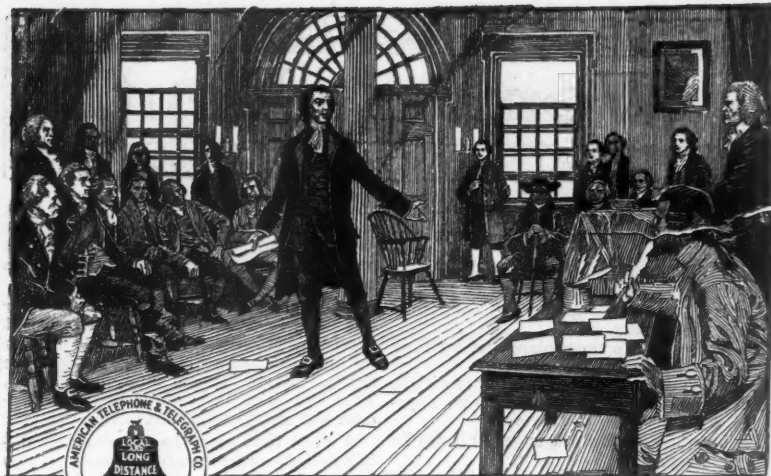
The English Walnut

Green's Fruit Grower: I have on my place a large English walnut tree which blooms profusely but does not bear. Can you give me any reason for it, or anything I can do?—N. T. Tongue, Md.

Reply: I advise you to plant several other English walnut trees near your tree. Your tree evidently bears blossoms that need fertilizing from other trees.



Photograph of picnickers bathing in the surf of Lake Ontario, which lies within nearby view of the office of Green's Fruit Grower.



Patrick Henry Addressing the First Continental Congress, Philadelphia, 1774

One Nation; One People

WHEN Patrick Henry declared that oppression had effaced the boundaries of the several colonies, he voiced the spirit of the First Continental Congress.

In the crisis, the colonies were willing to unite for their common safety, but at that time the people could not immediately act as a whole, because it took so long for news to travel from colony to colony.

The early handicaps of distance and delay were greatly reduced and direct communication was established between communities with the coming of the railroads and the telegraph. They connected places. The telephone connects persons irrespective of place. The telephone system has provided the means of individual communication which

brings into one national family, so to speak, the whole people.

Country wide in its scope, the Bell System carries the spoken word from person to person anywhere, annihilating both time and distance.

The people have become so absolutely unified by means of the facilities for transportation and communication that in any crisis they can decide as a united people and act simultaneously, wherever the location of the seat of government.

In the early days, the capital was moved from place to place, because of sectional rivalry, but today Independence Hall is a symbol of union, revered alike in Philadelphia and the most distant American city.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES

One Policy

One System

Universal Service

When you write advertisers Please mention Green's Fruit Grower.

The Parker Apple Grader and Sizer

If you are an up-to-date orchardist you need one of our machines. We sell direct from factory to grower. Price for July and August delivery \$45 f. o. b. Milford, N. H.
The Walter G. Parker Company, Milford, N. H.

FRUIT PROSPECTS FOR MICHIGAN

Other Sections of the Eastern and Middle States are Somewhat Similar

Bartlett pears, large crop. Kieffer pears, light. Duchess pears, light. Apples will average from 70% to 100%. Baldwins will be a heavy crop. Nearly a full crop of cherries consisting mostly of Early Richmond and Montmorency. Sweet cherries 75% of a full crop. The prospects are for a large crop of grapes. Blueberries a large crop. Blackberries not promising. Full crop of black raspberries with a 10% increase in acreage. Red raspberries promise well. These do not exceed one-third as much as the black varieties. The crop of plums will not be large. Quinces promise a large crop. Michigan growers have organized the Berrien County Bureau to help market the fruit.—C. A. G.

Dumps Like a Shovel

Earth doesn't clog or stick in the Standard Earth Auger. Digs easy; like boring a hole through soft pine board with a brand new brace and bit. Digs wells, post-holes or holes for any purpose.

STANDARD Well-Boring Outfit

Digs a 40 ft. well in one day. Will go as deep as 100 ft. Pure sparkling water all the year round from a Standard Outfit well. Make \$20.00 a day boring wells for your neighbors. Your own well for nothing and the auger yours to dig any holes you want about the place. Our illustrated booklet tells you all about it. Enclose 2c stamp to cover postage. Write Now.

STANDARD AUGER CO.
37-N West 34th St., Chicago, Ill.

"We can supply any time before October first our 'Quality' Apple Box Shooks. Direct shipment from our several mills at suitable prices." Central Box & Package Co., Omaha, Neb.

Woman's Dept.

An Epitaph

Here lies a poor woman who always was tired,
She lived in the house where the help was not hired,
Her last words on earth were: "Dear friends I am going
To where there's no cooking, no washing or sewing
But everything there is exact to my wishes,
For where they don't eat, there's no washing dishes.
I'll be where loud anthems will always be ringing,
But having no voice I'll get out of the singing.
Don't mourn for me now. Oh, mourn for me never
I'm going to do nothing forever and ever."

Jelly-Making is Profitable

Written for Green's Fruit Grower By
Anna Wade Galligher, Ohio

A little less than two years ago, a young woman with several small children, a shiftless husband and little else, found it necessary to earn money for household expenses. She had tried poultry-raising and had failed. One day a neighbor said to her: "Mrs. Dale, why don't you try making jelly for the students at N-? All of them have been boarding themselves for some time past, and they positively refuse to eat factory-made jellies. They buy large quantities of other things, such as pickles, chow-chow, catsup, jams, marmalades, preserves, canned fruits, fruit-butters and so forth."

This gave Mrs. Dale an idea. She decided at once that she would put up a few samples and make a special trip to the little college town. She was not an entire stranger in the town, but she relied upon the merits of her products alone, and asked aid of no one.

With a little basket of samples, each neatly labeled, she made a canvass of the boarding-houses (or eating-houses) where the students went for their meals.

At this particular college the students club together, buying the food themselves and each one paying a certain amount. Or rather at the last of each month the bookkeeper (who is always one of the students) counts up the month's expenses and all pay an equal share. Therefore, each one has a voice in the matter of food selection.

The cooks as a rule are hired by the students and have very little to say except in regard to the quantity of each separate article required. They of course know how much to buy.

So Mrs. Dale was asked to leave all of her samples at the first house visited. This she did, but called at several of the other "forts" as these unique boarding houses are called, to inquire whether it would be worth while to bring samples or whether some one else had already secured their trade. Several people in the vicinity were furnishing eatables for some of the "forts" but Mrs. Dale did not get discouraged. She asked if she might be permitted to bring samples of some things that the others had not been furnishing. She was told that she was welcome to bring whatever she might choose. Everything they bought in the way of food, as stated above, was selected by the students themselves. When they discovered something new or something especially nice, they seemed to care very little about the cost. They must have everything just to their liking. Therefore, all samples have to be tasted by the students. No orders can be given when the samples are left, because as a rule, they are not present.

After Mrs. Dale had left samples of various products at several of the "forts" she came to the conclusion that this was rather a costly way of getting trade and that she would not give away any more samples until she was sure of getting some orders. Of course, all the samples had to be large enough to be put on the table at meal-time, so that each of the students could have a taste.

"Tastes differ" as to how all kinds of

"eats" should taste and of course the cook was required to note any criticisms that might be made. And if the faults could be remedied, orders were given, together with advice as to what was wanted.

Although a good recipe for chow-chow was used, it was a difficult matter to suit everyone. However honest criticism was the only kind allowed. College students are nearly always honest and fair-minded. Therefore Mrs. Dale never resented criticism and always welcomed advice.

A short time after the samples were distributed the orders began to come, both by mail and by telephone. At first the orders were not large. One "fort" would want a gallon or two of chow-chow, or a few dozen pickles. Another would ask for perhaps, two dozen glasses of jelly or a few quarts of canned fruit and so on. After a while the orders came oftener and Mrs. Dale tried hard to fill every order.

Before long it became known that Mrs. Dale could furnish anything and everything in the way of fruits, pickles, etc., prepared to the "queen's taste" and put up in neat, attractive packages.

She was also very careful of her own personal appearance. But being naturally neat in dress, she made no special effort along this line, although she was well aware of the fact such trifles count. Young people generally are fond of good things and college students are no exception to the rule. They like to give parties or "spreads" as they are sometimes called. At these social gatherings some of Mrs. Dale's good things were sure to be in evidence if the hostess happened to be among her customers. Some of the others would often inquire about the

demand for factory-made products. It is quality that counts.

The students have set the standard, others have followed. They want home-made products. Nothing else will do. If any article is found to be not just satisfactory, it is returned unpaid for. Everything put up by Mrs. Dale bears her name and address. Needless to say, nearly everything, nowadays, that she makes is up to the standard, although it is hard to suit everyone. At present and for sometime past, Mrs. Dale has been earning from \$7 to \$100 a month, clear.—Rebecca Glenwood (Pen-name.)

For the Sewing Room

Written for Green's Fruit Grower by
E. J. Cannady

Torn places in silk or woolen dresses may be quickly and easily mended with mending tissue, which is obtained at almost any notion counter. Turn the dress wrong side out place a piece of tissue over the torn place, cover it with a piece of the material, and press it with a warm iron. This makes the patch adhere to the dress, and looks better than if it were stitched on.

A lace yoke or collar that is soiled, but is apt to pull out of shape when washed, should be ripped out of the dress and basted to a piece of muslin. Wash with as little rubbing as possible, rinse in water containing a little starch, and iron on the muslin side. Cut the basting threads and remove it. It will be the original shape and uninjured.

A supply of white collars and cuffs may often be made of materials found in the scrap bag, and improve the appearance of the waist wonderfully.

A button bag is one of the necessities to the economical woman. When a garment has finished its days of usefulness, remove the buttons, string them on coarse thread, and put them in the bag until they are needed again. They may be used on a great many garments, and be as good as new.

In these days of rapidly changing styles, there are always a number of dresses of good material that must be made over be-

many possibilities will suggest themselves. Get a pattern just your size, and by laying the various pieces on the material, you will see how to cut it to the best advantage. A piece of striped or plaid material may be purchased to eke out the plain goods if you have nothing on hand that will answer the purpose.

SOME GOOD RECIPES

Cherry Bread Pudding

Stir a pinch of baking soda into a quart of milk. Beat two eggs light with a cup of sugar and add the milk. Butter a shallow pudding dish and put in a layer of buttered slices of bread. Pour over it a little of the warm custard, then a layer of the cherries, then a layer of the cherries, then more bread, butter and custard, and a layer of cherries. Proceed in this way until the dish is full, having the top covered with the buttered bread. Cover the dish and let it stand an hour for the custard to soak into the bread. Then set it in a pan of hot water and bake for an hour, removing the cover when nearly done, to allow the pudding to brown nicely.

Cherry Conserve

This may be made of canned sour cherries or the fresh ones. If the canned are used it will require one quart. For the fresh use two quarts. Add to the cherries the juice and thin yellow rind of four oranges and four pounds of sugar, and cook together until thick and tender; just before removing from the fire add one-half pound English walnut meats. This is delicious, and so rich that a little goes a long way.

Grandmother's Raspberry Shortcake

One cupful of sugar, three eggs, two cupfuls of flour, a pinch of salt, half a cupful of butter, one cupful of milk, one teaspoonful of vanilla, and two teaspoonfuls of baking powder. Cream the sugar and the butter, add the well-beaten yolks of the eggs. Then mix alternately the milk and the flour with the baking powder and the salt. Add the vanilla and pour the mixture into greased jelly pans.

Filling

Three cupfuls of raspberries, slightly mashed, sprinkled with two tablespoonfuls of sugar.

Meringue for the Top

Let one cupful of mashed berries mixed with one tablespoonful of sugar stand for some time. Beat the whites of the eggs until very stiff and add four tablespoonfuls of sugar and then beat this until it is stiff; add three drops of lemon juice or extract. Beat into this the mashed berries and put it all in a hot oven for a few minutes, but do not brown.

Raspberry Ambrosia

Toss together lightly a box of red raspberries, a cupful of confectioner's sugar and a quarter of a cup of orange juice. Fill into small serving dishes—sherbert cups are good for this—and garnish each with whipped cream colored pink with raspberry or strawberry juice.

Date Pie

Stone a large cup of dates and cook until soft in sufficient water to cover them. Beat two egg yolks with two tablespoonfuls of sugar, a small tablespoonful of flour, and a pinch of salt, add a cup of rich milk, and stir the mixture until thick, stirring constantly. Flavor with lemon, cool and turn into a baked pastry shell. Cover with a meringue, made of the whites of the eggs and two tablespoonfuls of sugar. Brown and serve cold.

Green Pea Patties

Stew a pint of fresh young peas as usual; make a cream sauce of a tablespoon each of butter and flour, and the water in which the peas were boiled; add two tablespoonfuls of cream, salt and pepper to taste. The patties may be made of three rounds of bread, piled one above another, a wash of white of egg holding them firm; cut circles out of the two upper layers to make the cup or patty; set these in the oven to toast while the peas are being prepared.



Photograph of a bed of snowballs. This is an attractive ornamental bush and appears to advantage in a group near the outer boundaries of the lawn or in front of evergreens. The snowball is a hardy plant succeeding everywhere without nursing. It makes a showy and attractive group of flowers.

lady who furnished such "delicious strawberry and raspberry jam" or such "dainty pickles." This was the best kind of advertising for Mrs. Dale's products. Her business began to grow and she could not fill all the orders from her own supply of fruits, and she decided to buy fresh fruits from dealers and others to put up according to orders.

Last season, fruit of all kinds was plentiful. At the beginning of the fruit season Mrs. Dale bought a large quantity of sugar at wholesale; also a good supply of fruit jars, jelly-glasses, gummed labels, paraffin wax, etc. Glasses are not sold along with the contents, however. They are returned for refilling.

Next season a home canning outfit is to be installed. The demand for Mrs. Dale's home-made fruit-butters, jellies, jams, marmalades, preserves and pickles, to say nothing of a score of other things, is increasing rapidly among the better class of people in the town and there is very little

fore they can be used again, and it is astonishing how much can be accomplished along that line by the woman who knows how. The old dress is taken apart, the pieces brushed to remove the lint, and washed in hot suds until thoroughly clean. Then they are rinsed in clear water, and if the color is satisfactory, hung on the line to dry. If you wish to change the color, one or two packages of diamond dye used according to directions will accomplish that result. When nearly dry, it is rolled up tightly so the dampness will be distributed evenly, which requires an hour or more, then carefully ironed on the wrong side. Any spots which become too dry, should be covered with a damp cloth before ironing, and obstinate wrinkles treated in the same way. Choose a color that is becoming to the wearer. Any of the rich dark shades are pretty and the dyeing is very easily done.

If the fashion magazines are studied with the idea of remodeling old dresses, a great



192—Dress or Apron in 5 sizes: 2, 4, 6, 8, 10-year size 3 1/4 yds. 1 1/4 yards for the belt.

193—A Smart Suit in 5 sizes: 2, 4, 6, 8, 10-year size 3 1/4 yds. 1 1/4 yards for the belt.

194—Ladies' Coat in 5 sizes: 2, 4, 6, 8, 10-year size 3 1/4 yds. 1 1/4 yards for the belt.

195—A Charming Dress in 5 sizes: 2, 4, 6, 8, 10-year size 3 1/4 yds. 1 1/4 yards for the belt.

196—Ladies' House Dress in 5 sizes: 2, 4, 6, 8, 10-year size 3 1/4 yds. 1 1/4 yards for the belt.

Order patterns by mail. Address Green's Fruit Grower, Rochester, N. Y.

Patterns for Women Who Sew.



1741—Dress or Apron with Bloomers for Girls. Cut in 3 sizes: 2, 4, 6, 8 and 10 years. It requires for a 4-year size 3 1/4 yards of 27-inch material, with 2 1/4 yards for the bloomers. Price, 10 cents.

1742—A Smart Suit for the Little Boy. Cut in 4 sizes: 2, 3, 4 and 5 years. It requires 2 5/8 yards of 44-inch material for a 4-year size. Price, 10 cents.

1743—Ladies' Costume. Waist 1749 cut in 6 sizes: 24, 26, 28, 30, 32 and 34 inches waist measure. Skirt 1750 cut in 6 sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. To make the dress of one material will require 9 yards of 36-inch material. The skirt measures about 3 1/4 yards at the foot. This calls for TWO separate patterns, 10 cents FOR EACH pattern.

1744—A Charming Summer Frock. Cut in 4 sizes: 14, 16, 18 and 20 years. It requires 4 yards of 44-inch material for the dress with ruffles, and 1 yard without ruffles, for a 14-year size. The skirt measures about 2 7/8 yards at its lower edge. Price, 10 cents.

1745—Girls' Dress. Cut in 4 sizes: 4, 6, 8 and 10 years. It requires 3 1/2 yards of 36-inch material for an 8-year size. Price, 10 cents.

1746—Girls' Dress. Cut in 4 sizes: 4, 6, 8 and 10 years. It requires 3 yards of 44-inch material for a 6-year size. Price, 10 cents.

1747—Costume for Sport or Outing. Cut in 6 sizes: 24, 26, 28, 30, 32 and 34 inches bust measure. It requires 6 3/4 yards of 36-inch material for a 24-inch size. The skirt measures about 3 yards at the lower edge. Price, 10 cents.

1748—Ladies' House or Morning Dress. Cut in 6 sizes: 24, 26, 28, 30, 32 and 34 inches bust measure. It requires 6 3/4 yards of 36-inch material for a 24-inch size. The skirt measures about 3 yards at the lower edge. Price, 10 cents.

Order patterns by number and give size in inches. Address Green's Fruit Grower Co., Lancaster, N. Y.

the shells and send to the table hot. They are delicious with roast lamb.

Tomatoes Stuffed With Peppers

Wash, cut a slice from stem end and scoop out centers of six medium sized tomatoes, sprinkle salt inside and fill with equal parts mixed onion and sweet peppers, chopped fine, and seasoned with salt; put a small bit of butter on top of each and bake thirty minutes in a quick oven; remove carefully from the pan, draining back the juice, and place in dish for the table. Add to juice in pan one-half cup of cream, or top milk, and thicken slightly like a cream sauce; a dash of pepper and salt to taste. Pour this around the tomatoes and serve.

Dishwashing by Machinery

I was recently invited into the kitchen of one of the large department stores of New York State. These department stores are not satisfied with supplying everything from a box of tacks up to shoes, dry goods, groceries, carpets, and almost everything that man or woman can desire, but they have in addition a dining room carefully conducted with great cleanliness. Those who get their meals at this dining room are at liberty at any time to go into the kitchen and see the processes of cooking and preparation of dishes, etc.

I was deeply interested in the dishwashing, which was done something as follows: A large tray, holding possibly a bushel, was speedily filled with soiled plates and other dishes, each plate being put in a slot so that it did not come into contact with another plate. Then by pressing a lever this tray of dishes was immersed into a tank of scalding hot water several times. The dishes would dry of themselves in almost a moment after being withdrawn owing to the heat, requiring no wiping of the dishes. Bear in mind that in the act of wiping dishes germs are carried to the plates rather than removed. The submergence into scalding water leaves the plates not only free from grease and food, but free from germs of all kinds.

Cooking Bacon

While lunching at a club last night I was told by the steward that if the slices of bacon were soaked in milk for a few minutes before cooking this process would add to the flavor and remove some of the saltiness from the pork. He simply placed the bacon on plates in the oven where it need remain but a few moments, being careful not to brown the bacon excessively.

Another method was to beat up an egg and dip the slices of bacon in the beaten egg before broiling. Bacon is becoming more popular each year. When well cooked it is a delicious and nourishing dish.

Soda or Sour Milk Biscuits

Into one quart of flour put one level teaspoonful of salt and sugar each and one full teaspoonful of baking powder. Sift into a pan and mix in lard the size of an egg. Dissolve one level teaspoonful of soda in one pint of sour milk, pour into the prepared flour and mix into biscuits. Have ready a dripping pan with enough melted lard in it to dip the top of each biscuit in and bake in a moderate oven. This dough is delicious for individual shortcakes. When using buttermilk no shortening is needed. This recipe will make a dozen biscuits.

To make javelle water put four pounds of bicarbonate of soda in a kettle and add one gallon of water. Boil fifteen minutes remove from the fire and stir into it one pound of chloride of lime. Cool and pour off the clear liquid into a jug or dark bottles. To take out peach and other fruit stains use a cup of the bleaching fluid to a quart of water. To whiten the clothes when washing add one cup of the fluid to a tub of water.

Hickory, Miss.

Mr. Charles Green—I have taken Green's Fruit Grower for a good many years. I have a bearing Elberta peach tree that you sent me as a premium.—Mrs. A. Deming.

CATALOGUE NOTICE

Send 10c in silver or stamps for our Up-to-Date 1916 SPRING & SUMMER Catalogue, containing over 400 Designs of Ladies', Misses' and Children's Patterns, as well as the latest Embroidery Designs, also a CONCISE AND COMPREHENSIVE ARTICLE ON DRESSMAKING, giving valuable hints to the home dressmaker.

The Care of Silver

Editor of Green's Fruit Grower: The extra supply of silver should be kept in chambray or cotton flannel cases, stitched in pockets just wide enough for the forks, knives or spoons they are to hold. Sugar bowls, cream pitchers, cake baskets and other large pieces may be wrapped in cotton flannel, if you do not have a bag made for each piece. They will not become tarnished or scratched when cared for in this way. They should be thoroughly dry before they are put away, and a few pieces of camphor gum kept in the drawer or box with the silver, helps to keep it bright.

To many a housekeeper the polishing of the silver is a task to be dreaded and the larger pieces are put away and used only on special occasions because of the work it takes to keep them looking well. One silver polish after another is tried, hoping to find something that will lighten the work, but if each piece must be cleaned and polished separately, it will take time and labor. There is an easier way however, for the whole silver service can be cleaned in a few minutes, just as effectively as if it had been subjected to several hours of hard rubbing. All the silver that needs cleaning should be put in an aluminum or enameled pan and covered with a suds made by dissolving a tablespoonful of gold dust washing powder in two quarts of boiling water. Set the pan on the stove and allow the water to boil ten minutes, then lift them out with a wire spoon and put them in a pan of hot rinse water. Take one piece at a time from the water, and rub briskly as you dry it. Silver cleaned in this way will be brightly polished and look like new. It saves time and labor, and there is no danger of rubbing off some of the silver plating as there is in using silver soap or powders.—E. J. C.

Dr. James S. Kirtley Says Parents Are To Blame for Most of Sons' Faults

"We often hear a mother or father shouting to their boy, 'Can't you keep still?' Of course he can't, and the parents ought to know it, and the quicker they do the better for the boy. It is not the nature of a strong, healthy, growing boy to be able to keep still. There are two ways to drive



Going to the well for water. One of the acts of childhood never forgotten.

a horse: the right and wrong way. It is the same with the boy. A boy has the faculty of faith and an ideal. A boy has the instinct to obey those in authority over him. Parents should never nag a boy, killing him would be much easier. When there is anything wrong with the boy, parents should always first find out what is wrong in themselves, for the fault of the boy is usually the fault of the parents."

In concluding, Dr. Kirtley told those present a boy should never hear a lie, or be given the opportunity to find out a lie. A boy has a good memory, and, it is the biggest disappointment of a boy's life when he finds out that his obedience to one who was in authority has been given to one who later did not or could not measure up to the standard the boy expected of him. Another important point brought out by the speaker was that to break a boy's will power is to start him out in life with the greatest handicap a boy ever started with.

Prevent House Flies

Those carriers of Typhoid and other Dangerous Diseases

The United States Department of Agriculture (Bulletin No. 118) recommends Borax as the most effective substance in preventing the hatching of fly eggs.

The fly lays its eggs in garbage, stable manure or other refuse. The use of

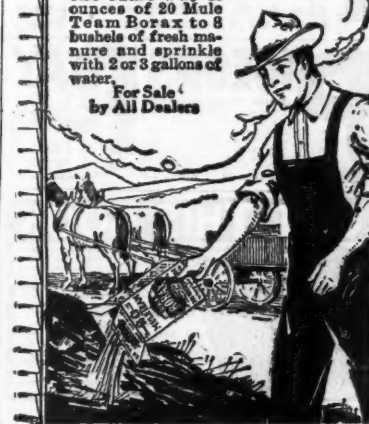
20 Mule Team Borax

will rid your premises of this pest.

DIRECTIONS

Apply 2 ounces of 20 Mule Team Borax to the can of garbage, daily, through a fine sieve or flour sifter. Apply in the same way 10 ounces of 20 Mule Team Borax to 8 bushels of fresh manure and sprinkle with 2 or 3 gallons of water.

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WANTED IDEAS Write for List of Patent Buyers and Inventors Wanted. \$1,000,000 prizes offered for inventions. Send sketch for free opinion as to patentability. Our four books sent free. Write inventors to sell their inventions. VICTOR J. EVANS & CO., Patent Attys., 531 Ninth, Washington, D. C.

GINSENG AND GOLDEN SEAL

Make more money in your back yard growing these two plants than most people make off a 100-acre farm. As a money maker nothing will equal it. Seed, 25c per package; 3 packages, 50c. Copy of "How to grow Ginseng and Golden Seal" free with each order for seed. Order seed now for fall planting. Catalog free.

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Burns Kerosene. Can't explode. Can't set fire to anything. Burns in all kinds of weather. Rain proof, wind proof, bug proof. For farmers, teamsters, bucksters, plumbers, dairymen, campers—everybody needs it.

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Write for plan how we furnish representatives with automobiles. This is no selling contest where only one person wins. Anybody can earn this auto. THOMAS MFG. CO., 970 East St., DAYTON, OHIO



PARKER'S HAIR BALSAM

A toilet preparation of merit. Helps to eradicate dandruff. For Restoring Color and Beauty to Gray or Faded Hair. 50c. and \$1.00 at Drugists.

ELECTRIC HOME AND FARM LIGHTING PLANTS LAMPS, DYNAMOS, MOTORS, Engines Belts, Batteries, Fan and Power Motors, Fish, Bike and Auto Lights. Catalog 3cts. Ohio Electric Works, Cleveland, O.

PATENTS —64 page Book FREE Highest References. W. T. FITZGERALD & CO., 501 F St., Washington, D. C.

90 VAR'S All breeds Poultry, Eggs, Ferrets, Dogs, Pigeons, Hares, etc. List free. Colored Des' of 50 page book 10c. J. A. Bergery, Box J, Telford, Pa.

Plants, Strawberries and Vegetables

All vegetables and strawberries including everbearing. Get my catalog. Read why I sell choice plants at half the price of others. C. E. FELD, Sewell, N. J.

AUTO TOP ROOF \$5.50 UP

Easy to apply, you save two-thirds price of new top; auto wheels desirable fine 515; heavy and wavy top; auto top; auto top. Our catalog gives wholesale prices and freight. Write for one. C. E. FELD, Sewell, N. J.

STRAWBERRY PLANTS

For August and Fall planting. Runner and Pot-grown plants that will bear fruit next summer. RASPBERRY, BLACKBERRY PLANTS; FRUIT TREES. Catalogue free. Harry D. Squires, Remsenburg, N. Y.

POULTRYMAN'S TEXT BOOK Shows how to stop every leak. Most efficient ways of handling poultry. Up-to-date appliances—poultry necessities—remedies. Poultrymen can increase their profits by reading this instructive book written by the originator of Premier Barred Rocks. Write today—FREE. The O. B. Andrews Company, Dept. GF, Chattanooga, Tenn.

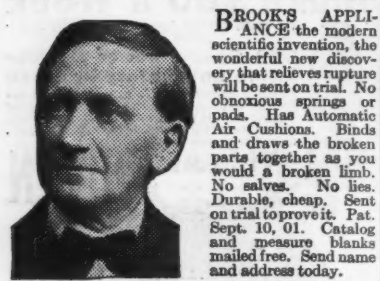
PIGEONS PAY Better Than Chickens. Young pigeons (squabs) bring 40 to 50¢ each when 8 to 10 weeks old. Big demand in city markets. Each pair of pigeons easily clear \$4 per year. Always pennies up. Very little space and money needed to start. Free Book explains all. J. H. Squire, Dept. 15, Ames, Iowa.

GET THIS BOOK Galloway's wonderful book of bargains describes fully and prices Galloway Cream Separators, Mangle Squeezers, Gasoline Engines, Farm Tractors. Values 1-3 to 1-2 on prices usually asked. Also lists and prices farm implements, fences, auto supplies, everything for farm and household. **SAVE MONEY** By asking for this 200-page book today. A postal will do. First edition exhausted; second edition this bargain book now ready. **Wm. GALLOWAY CO.** Dept. 547, Waterloo, Iowa.

LADDERS REALONES So light a woman can handle, so strong they cannot break. Single, Extension, Step and Fruit. Write for catalog and get them at Winter Discounts. The Berlin Fruit Box Co., BERLIN HEIGHTS, OHIO.

High Class Hunting and Sporting Dogs such as coon, deer, bear, wolf, cat, rabbit, and foxhounds. Ferrets, rabbits, guinea pigs, pigeons, swine, youngstock a specialty. Ten cents for handsome catalogue of all breeds. Poultry catalogue six cents. **SUSQUEHANNA VALLEY KENNELS** Dept. GFG. Tunkhannock, Pa.

Don't Wear a Truss



C.E. Brooks, 1772-A Brooks Bldg., Marshall, Mich.

Do Business by Mail

It's profitable, with accurate lists of prospects. Our catalogue contains vital information on Mail Advertising. Also prices and quantity on 6,000 national mailing lists, 99% guaranteed. Such as:

War Material Mfrs. Cheese Box Mfrs. Shoe Retailers. Auto Owners. Contractors. Tin Can Mfrs. Druggists. Farmers, Etc.

Write for this valuable reference book; also prices and samples of fac-simile letters. Have us write or resurvey your Sales Letters.

© Ross-Gould, 8447 Olive St.

Ross-Gould Mailing Lists St. Louis

Poultry Dept.

"PUTTING DOWN EGGS"

New Method Introduced in West is said to Give Particularly Good Results Sterilizing Eggs

The process described in this article has been used for some time in California, but only recently has it been introduced east of the Rocky mountains.

"Sterilizing eggs is a simple, inexpensive, scientific treatment. The success of the sterilized sealed eggs depends upon subjecting the egg to an exceedingly brief time to a temperature considerably above that of boiling water—varying according to the quality and condition of the egg."

"The medium of applying this high degree of heat is a transparent oil, which of necessity must be neutral, odorless, tasteless, and of high boiling point."

Heat Acts on the Shell

Asked to describe what occurs immediately upon immersion of the egg in the heated oil, Mr. Kimball said that the first thing was the opening and enlarging of the pores of the shell, permitting the air and the gas in the egg, to escape, thus creating a partial vacuum. By actual observation at this time, he said, minute bubbles of air may be seen escaping, being thrown off through the oil.

"The heat action solidifies the two porous membranes just inside the shell," said Mr. Kimball, "vulcanizes them, and cements them to the shell. A partial illustration of this is the tough, leathery condition of the membrane in a hard-boiled egg. The toughness of this membrane is evident, and is in sharp contrast to the tender, porous membranes in an uncooked egg. This same

eggs will keep under ordinary refrigeration in a perfect state of preservation without change for any reasonable length of time. They may be treated or used the same as fresh eggs.

"The whole method is simple, yet effective. It is the practical application of the principles of the modern canning factory, which have been scientifically adapted for the preserving of eggs. From a sanitary and hygienic standpoint it is highly commendable."

POULTRY NOTES

Stone drinking fountains are much better than tin.

Never let feed become sour or fermented. It should be fresh and wholesome.

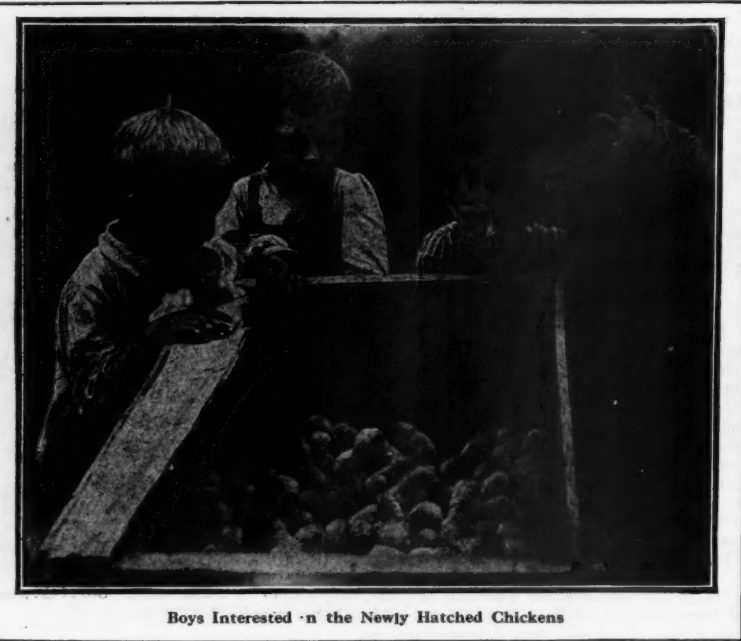
There is but one way to know if the hens are paying—keep a strict account of both the expense and proceeds.

Scald out all drinking vessels and feed troughs every few days, to keep them from developing disease germs.

Do not use harsh methods in breaking up the broody hens. Remember that broodiness is nature's provision for rest.

About the best remedy for scaly legs, which is the work of parasites, is an application of melted lard and sulphur once a week.

Now is the time to keep a close watch for vermin. Whitewash is cheap and effective.



Boys Interested in the Newly Hatched Chickens

effect is produced in a sterilized egg, only in a greater degree.

"The shell itself is further hermetically sealed by the absorption of oil. As the egg is withdrawn from the heated oil the air pressure from without completely fills every pore of the shell with the oil. The egg is thus hermetically sealed both from without and within. The result is that while the solidification of the membrane within protects the egg content, the sealing of the shell with oil forms a double protection, absolutely prohibiting contact with foreign impurities, either gas or liquid."

"In this process of sterilizing and sealing, the egg is as securely canned in vacuum as though it were in a glass or metal container. It is sealed within itself, thoroughly sterilized, hygienic both within and without, thus forming an ideal package for preserving the egg indefinitely."

"Practical experience has demonstrated," he continued, "that sterilized sealed shell

ive. Put it on, and don't be afraid of using too much.

Young ducks need an unlimited supply of fresh water, but it should be so placed that they cannot get into it with their feet.

By all means, keep the young pullets growing—but not too fast—for on them depends the future supply of eggs and young chicks.

Grain is a necessity in the feed of every hen. Do not think that you can fill up troughs with bran alone and then go off and leave them safely to that and grass; it will never do.

When chicks seem doxy and hang their wings, or sprawl on the floor, unable to walk, look for head lice. It is best to grease the head of each chick once a week anyway.

The critical period in the young turkey is generally at an end when six weeks old. In breeding, lice, dampness and improper food are the main causes for great mortality.

Provide a snug windproof shelter for the hen with chicks. Allow the warm sun to enter and keep out the rain and wind. A little dirt thrown all around the chick coop will make it draught proof. This will also aid in keeping the rain water away.

Keep fine grit and charcoal where the chicks can have access to it at all times. They must have the grit and while they can get along without the charcoal, they will do a great deal better if they have it. It aids digestion and promotes health.

Shade is necessary for growing chicks and adult fowls. Don't forget it during the hot season. Provide shade and shelter from the hot sun and plenty of places to run under in sudden showers. Quickly growing annual vines will supply the shade if there are no trees in the yard. For this purpose the wild cucumber is very good. But best of all are the fruit trees in the yards, for they serve a double purpose.

Grubs in Strawberry Patch

Mr. Chas. A. Green: I am a subscriber of your splendid paper and have also read "How I Made the Old Farm Pay," with great interest, as I am especially interested in fruit. As you made your start from strawberries am writing you for information.

We live in Beaver Co., Okla., a few miles from Liberal, Kansas, and cannot raise strawberries without irrigation. We have a nice patch that we started this spring with the water piped to them, but in cultivating them have found that in the fertilizers we used, grub worms are just hatching. We noticed in a recent issue of your paper that the best remedy you knew was to move the bed, but as that is almost impossible with us, thought you might make some suggestion we could try.—John K. Dickey, Kansas.

Reply: I have never heard of any effective plan for white grubs, which eat the roots of strawberries and other plants, including grasses. Sod ground is apt to be infested with white grubs, therefore strawberries should not be planted on a fresh turned sod. The usual course taken is to dig out the worms as soon as a wilted plant is seen, but sometimes the grubs destroy the entire plantation in spite of this treatment. After nearly forty years experience I can say that I have never met with very serious loss by white grub, since I do not plant strawberries on soil recently occupied as an old meadow or in any sod land.

Black Leaf 40 for Currants

Mr. Chas. A. Green: Currant bushes in this part of Iowa are attacked by the aphids each year.

Black Leaf 40 is the best contact spray I know of but tobacco stems soaked twenty-four hours in water will rid the bushes of the pests. Two pounds of stems to a gallon of water and then dilute to color of strong tea.—F. P. Whicher, Ia.

Subduing Quack Grass, Etc.

A New Hampshire subscriber has a farm of 110 acres covered with witch grass. He is very anxious to get rid of this witch grass and asks what kind of implements he should buy for this purpose. Can he use a disc harrow with one horse for good work? He thought of buying a Forkner light harrow but has been told it will not do for witch grass. Shall he plow, disc harrow several times and then drag with a hay rake? The disc harrow seems to make the grass thrive more. He also wishes to know if it is better to plow orchards or keep them in sod, and whether he shall get a grape hoe for his vineyard.

He also would like some information about a new fertilizer called Alphano Humus. He has talked with an agent who sells this fertilizer and is told that this is a natural deposit found in New York state and is a great thing for the soil. He wants a good fertilizer for a light, sandy soil. Manure is not available to any extent where he lives.

What are the best fillers for an apple orchard—cherry, plum, peach, pear or potatoes?

Reply: In order to destroy witch grass, which I assume to be the same as quack

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grass, the soil should be unoccupied by vines, trees or plants, and should be given thorough cultivation in a way to remove all the roots possible and have them carried away, then to follow up this thorough treatment with some hoed crop the second year, which if given a thorough cultivation should subdue the quack grass. We have continually fought and conquered quack grass at Green's Fruit Farm, where it occasionally appeared in large patches. The spring tooth harrow is good to follow shallow plowing for quack grass.

There are many devices for cultivating close to grape vines. I do not know which is best. Cultivators are made that extend to one side further than to the other side, enabling you to get very close to the vines without the horses being crowded towards the grape vines.

Worms in Green Corn

My friend who has been buying green corn early in July, from the southern states showed me several ears which contained worms nearly two inches long, somewhat resembling tent caterpillar but of lighter color. As I had never seen worms in green corn grown at the north, I wrote to the Department of Agriculture at Washington, D. C. who replied as follows:

"Doubtless the insect to which you refer and which is observed in the ears of corn is the corn ear worm, *Heliothis obsoleta*. This insect is injurious at times in the north but becomes of greatest importance in the south where it is almost impossible to control its occurrence on corn."

"A Garden is a lovesome thing, God wot;
Rose plot, Fringed pool, Ferned Grot—
The veriest school Of peace;"

Classified Advertisements

No display advertising will be placed in this department and no type larger than 8-point. The first three words only to be printed in capital letters. Each abbreviation and number will count as one word. Rate 10 cents per word for each insertion. No advertisement inserted for less than \$1 per issue. We cannot afford to do any bookkeeping at this rate. Cash must accompany every order. Orders must reach us not later than the 15th of the month previous to the month in which the advertisement is to appear.

Terms: CASH WITH ORDER.

Green's Fruit Grower Co., Rochester, N. Y.

HELP WANTED

MEN—WOMEN WANTED EVERYWHERE.
U. S. Government Jobs. \$75.00 to \$150.00 month.
Vacations. Common education sufficient. Write
immediately for free list of positions now obtainable.
Franklin Institute, Dept. M147, Rochester, N. Y.

FOR SALE

DAY OLD CHICKS for sale, 11 varieties at cut price. Write for latest circular, it is free. Old Honesty Hatchery, New Washington, Ohio. Dept. G.

OVERCOME CONSTIPATION and headache and greatly lessen liability to appendicitis; natural safe home method. Full directions fifty cents. Postal Cards never answered. Regulator Co., Box 687, Milwaukee, Wisconsin.

OPPORTUNITY—Ginseng half price, leaving farm. R. Klink, Westerville, Ohio., No. 4.

USED STEAM BOILER—75 horsepower, return tubular type, in fair condition. A bargain for nursery or greenhouse heating. Particulars on request. The Norwich Pharmacal Company, Norwich, N. Y.

FARMS WANTED

WANTED TO HEAR from owner of good farm for sale. Send description and cash price. R. G. List, Minneapolis, Minn.

FARMS FOR SALE

HARVARD APPLE and stock farm, 1500 bbls. in season, 152 acres, cut 85 tons hay, keep 40 cattle and 3 horses. Imposing 2-story house, 14 rooms. Modern stock barn 150 feet, cost \$22,000, roofs slated, various outbuildings; good repair. Price \$13,000, part cash. Geo. A. Coolidge, Hudson, Mass. Farm catalogue postpaid by Chapin Farm Agency, 294 Washington Street, Boston.

GOOD FARMS in nearly every desirable section of New York State. Tell us what kind of farm you want and how much cash you can pay and we will send you a carefully prepared list of just such places. Central Office The Farm Brokers' Association, Inc., Oneida, N. Y. Other offices throughout the State.

PATENTS

IDEAS WANTED—Manufacturers are writing for patents procured through me; 3 books with list of hundreds of inventions wanted sent free. I help you market your invention; advice free. R. B. Owen, 50 Owen Bldg., Washington, D. C.

Tips on Picking and Packing Pears

Pick pears while they are still hard but not before they have attained their average size under normal conditions. Pick the largest ones first leaving the balance for a few days to increase their growth, says the Walnut Book, Oregon.

Pack direct from the box into which the fruit has been sorted.

Bartlett and Flemish Beautys should weigh, when packed and nailed up, 52 lbs.

The Clapp's Favorite, which is a lighter pear, should weigh from 49 to 51 lbs.

Beurre d'Anjou and Comice should weigh from 48 to 50 lbs.

Winter Nelis should always be packed 5 tier deep, never six. The smaller sizes will be light, often not over 46 lbs. but are acceptable if the pack is tight.

The weight of the packed box should be regulated by the firmness with which the pears are placed in the tier.

The large 3x2's and 3x3's should be packed loosely while the smaller ones should be packed tightly. Pack 4x3's tightly.

Never allow any of the fruit to be injured by nailing on the cover.

In starting to pack a box of pears, lay the first row along the end of the box with the blossom end of the pear toward end of the box and the stem end pointing away from the packer; the remaining tiers are laid in the opposite direction, that is, the stem end is pointing toward the packer and slightly pointing up.

All 3x2 pear packs should be 4 tier deep. Start the first tier with 3 pears, the rest will have 2 pears occupying the spaces between the first 3 and subsequent rows work out the same way.

The second tier will pack over the spaces of the first tier and the fourth over the third.

The 3x3 pear pack should always be five tier deep and place the first pear in the lower left hand corner of the box and the other 2 so placed that the distance between first and second and the second and third will be the same as that between the third pear and the lower right hand corner of the box. The next three pears are placed in the spaces provided by the placing of the first three and continue in this manner until the first tier is completed. The second tier is packed over the first tier spaces, the third over the second tier spaces, likewise the fifth over the fourth tier spaces. Be careful to always keep the spaces uniform and the alignment perfect.

Amazing Appetites of Insects

If a baby had the appetite of a young potato beetle it would eat from fifty to one hundred pounds of food every twenty-four hours. If a horse ate as much as a caterpillar, in proportion to its size, it would consume a ton of hay every twenty-four hours. A caterpillar eats twice its weight of leaves every day; but a potato beetle devours every day at least five times its weight of foliage, every bit of which represents just so much money to the farmer. The most destructive of all insects, however, is the grasshopper, which, when in good health, consumes in a day ten times its weight of vegetation.—Exchange.

Something New About Selling Fruit

It is not difficult to produce strawberries, raspberries, currants, grapes, apples, peaches, pears, plums, quinces and other fruits. In this country, which is the greatest fruit country of the world, it is easy for those who understand the business to produce fruits. The difficulty often occurs when we come to sell our fruit. If we have a small plantation, a small orchard, we may not have difficulty, but if we have a large plantation, business ability will be required in order to dispose at good prices of the carloads that we may have secured in producing.

I find here and there a man advertising grape fruit (pomelos) and others advertising high quality apples in small size packages containing about a bushel.

The latest surprise which I have met with is an advertisement in the New York Times, occupying eight inches of double column space, announcing that a certain strawberry grower living in New Jersey will place upon the market an almost unlimited amount of strawberries of superior quality and size at reasonable prices. There are two illustrations of strawberries in this advertisement. The announcement reads as follows (I have made some changes in the names):

Three bites to a berry.
Four inches around.

Ready next week.

Johnson's Sweet Heart Strawberries. Fine, big, luscious, long stemmed ones, measuring four inches around.

Three bites to a berry. Three bites of honey-hearted lusciousness, like the home grown berries of our boyhood, down on the farm. That kind of joy giving berries.

No hard, acid ones. Every berry will be ripened to succulent perfection.

Carefully picked and packed one day, under strict sanitary methods, and ready for you early the next morning.

Next week, they will be on sale at the best grocers.

The leading clubs and restaurants will be serving them with the stems on for "sugar dipping," or in the old way with cream.

If you can't get them from your grocer, ask him to drop a card or 'phone to our New York distributor.

Sweetheart strawberries.

Johnson's Farms Co., Blank Blank, N. J. John Jones, 79 Blank St.

Sole distributor for New York.

Now the question arises, Will such advertising as the above be profitable? My answer is that such an advertisement probably will not be profitable the first season, but that if continued year after year it might result in notable success.

The strawberry is a perishable fruit. It will stand up but a short time after picking. If strawberries can be sold by this advertising method there is certainly hope for other less perishable fruit being sold at a profit by this method.

Lemons are being advertised, not so much by individuals as by importing companies or other corporations. In order to make a sale for more lemons, booklets or circulars are issued telling how desirable lemons are and how healthful and how they may be used in various ways and processes.

Sections of the country have united in advertising certain fruits. For instance, you have noticed the announcement of Sunkist oranges. These advertisements are supposedly paid by the united orange growers of California. It cannot be doubted that the time is coming when apples, peaches, and other fruits will be distributed more widely through the use of advertising.

The question arises, Since I may be a possible advertiser where shall I advertise? My answer is first advertise by means of a sign or blackboard placed on the high way near your house in a conspicuous place. This is the cheapest and easiest method to advertise that you have fruit, eggs or other farm produce for sale. The next best place to advertise is in your local paper, whether it be a weekly or a daily. Go slowly in making investments in newspaper advertising.

The Seven Ages of Man

All the world's a stage,
And all the men and women merely players;
They have their exits, and their entrances;
And one man in his time plays many parts,
His acts being seven ages. At first, the infant,
Mewling and puking in the nurse's arms;
And then, the whining school-boy, with his satchel,
And shining morning face, creeping like snail
Unwillingly to school: And then, the lover;
Sighing like furnace, with a woeful ballad
Made to his mistress' eyebrow: Then, a soldier;
Full of strange oaths, and bearded like the pard,
Jealous in honor, sudden and quick in quarrel,
Seeking the bubble reputation
Even in the cannon's mouth: And then, the justice
In fair round belly, with good capon lin'd,
With eyes severe, and beard of formal cut,
Full of wise saws and modern instances,
And so he plays his part: The sixth age shifts
Into the lean and slipper'd pantaloon;
With spectacles on nose, and pouch on side;
His youthful hose well sav'd, a world too wide
For his shrunk shank; and his big manly voice,
Turning again toward childish treble, pipes
And whistles in his sound: Last scene of all
That ends this strange eventful history,
Is second childishness, and mere oblivion;
Sans teeth, sans eyes, sans taste, sans every thing.
From Shakespeare's As You Like It,
Act II, Scene VII.

SAVE YOUR APPLES

With a Monarch Hydraulic Cider Press you can turn your apples into good selling cider. You can also do custom pressing for your neighbors. Our improved high pressure construction gets all the juice from the apples with minimum power. All sizes of Presses, from 15 to 400 barrels a day. A small investment will start you in a profitable business. Ask for free 60-page Press Catalogue describing the 1916 Outfits. A. B. FARQUHAR CO., Ltd., Box 105, York, Pa.

Hydraulic Cider Press Profits

Write for FREE BOOKLET based on thirty years' PRACTICAL EXPERIENCE.

E. B. VAN ATTA & CO., 114 Penn Ave., Olean, N.Y.

Also Gas Engines, Boilers, and Steam Sawmills.

CIDER Making Pays

With Mt. Gilead Hydraulic Cider Presses Thousands are making Big Money with our presses—why not you? Sizes 10 to 400 bbls. daily; hand or power. Cider evaporators, apple-butter cookers, vinegar generators, filters, etc. Fully guaranteed. All power presses have steel beams and sills. Catalog Free.

HYDRAULIC PRESS MFG. CO.
104 Lincoln Ave., Mount Gilead, O.
Or Room 119 N. Cortlandt St., New York, N. Y.

Parcel Post Boxes

The safest and most economical way to ship dairy, truck and fruit produce. Any size box, light, easy-to-handle, strong, fine for shipping. We also make Andrews Efficiency Egg Carriers, the safe, sure way to ship eggs. Write today for descriptive catalog. Free!

THE O. B. ANDREWS COMPANY
Dept. GF, Chattanooga, Tenn.

Engine "WHY?" Book

One of the cleverest little books on engines that has ever been published, has just been printed by Mr. Ed. H. Witte, a Kansas City engine expert. He says that while the supply of books lasts, he will be glad to send anyone who is interested a copy of this book, which is called "Why?" Just write "Why" with your name and address on a postal or scrap of paper and address Mr. Witte, 2378 Oakland Ave., Kansas City, Mo.

MYERS HYDRO-PNEUMATIC PUMPS FOR THE HOME WATER SUPPLY

Every Woman and every member of any family living in the country, small town or village, will enjoy reading our new Catalog, telling all about MYERS HYDRO-PNEUMATIC PUMPS, and how they have brought to the door of every home—yours included—such conveniences as a bath room, toilet, and running water in the kitchen and laundry—water at the turn of a faucet, same as in city residences, wherever and whenever wanted.

MYERS HYDRO-PNEUMATIC PUMPS are made in many styles and sizes for operation by hand, windmill, gasoline engine, or where electric current is available, by motor. These are the pumps that pump air and water into a pressure tank. This compresses the air in tank which acts as a reserve power forcing the water to any point desired. An equipment is easy to install, the upkeep is nominal and the water service excellent.

You are tired carrying water and want to know more about this modern way, and how easily you can now have a successful private water system in your own home. Our Catalog will tell you. Write for it.

F. E. MYERS & BRO. ASHLAND, OHIO.

Seasonable Supplies

SUCH AS
FRUIT DRYERS CIDER MILLS
LADDERS JELLY PRESSES
FRUIT PARERS BERRY BASKETS

For sale at
Reasonable Prices

Send postal for illustrated circular
Green's Nursery Co.
Service Department Rochester, N. Y.

advertisement

Only \$2 Down
One Year to Pay!

\$24 Buys the New Butter-
fly Jr. No. 2. Light running,
easy cleaning, close skim-
ming, durable. Guaranteed
a lifetime. Skims 56 quarts
per hour. Made also in four
larger sizes up to 1-2 shown here.

30 Days Free Trial Earns its own cost
and more by what
it saves in cream. Postal Invoice Free cat-
alog, folder and "Direct-from-factory" offer.
Buy from the manufacturer and save money.

ALBAUGH-DOVER CO. (INC.)
2109 Marshall Blvd. CHICAGO

15 **95 AMERICAN**
Upward **CREAM**
SEPARATOR
Sent on Trial. Fully Guaranteed.
Easy running, easily cleaned.
Skims warm or cold milk. Bowl a
sanitary marvel. Whether dairy
to large or small obtain handsome catalog. Address,
Box 5121
AMERICAN SEPARATOR CO., Bainbridge, N. Y.

SPECIMEN COPY FREE
A specimen copy of Green's Fruit Grower mailed free
to any address sent us by a present subscriber.
GREEN'S FRUIT GROWER CO.
Circulation Dept. Rochester, N. Y.

MORE FRUIT
from your trees if you keep them free
from San Jose Scale, Aphids, White Fly,
etc. by spraying with
GOOD'S CAUSTIC
SOAP N°3
Kills all tree pests without injury to trees.
Fertilizes soil and aids healthy growth.
Our valuable book on Tree and
FREE Plant Diseases. Write today.
JAMES GOOD, Original Maker, 953 N. Front St., Phila.

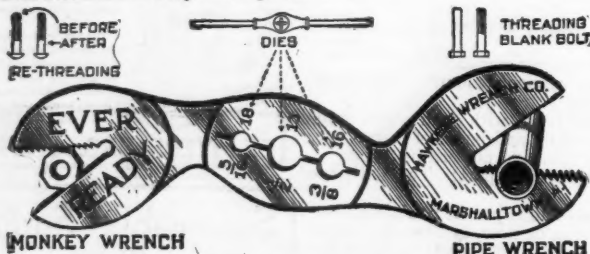
ABSORBINE
TRADE MARK REG. U.S. PAT. OFF.
Reduces Bursal Enlargements,
Thickened, Swollen Tissues,
Curbs, Filled Tendons, Sore-
ness from Bruises or Strains;
stops Spavin Lameness, allays pain.
Does not blister, remove the hair or
lay up the horse. \$2.00 a bottle
at druggists or delivered. Book 1 M free.
ABSORBINE, JR., for mankind—an
antiseptic liniment for bruises, cuts, wounds,
sprains, painful, swollen veins or glands. It
heals and soothes. \$1.00 a bottle at drug-
gists or postpaid. Will tell you more if you
write. Made in the U. S. A. by
W. F. YOUNG, P.D.F., 11 Temple St., Springfield, Mass.

A Real Necessity for Every Farm and Home

An All Purpose Handy Wrench

The Ever Ready

A LIGHT, compact tool you can carry in the hip pocket. Made from
the finest tool steel, oil tempered and highly polished. Is both a
pipe and nut wrench. It has three standard size dies that will re-
thread and cut new threads on bolts. A very handy tool in repairing
broken bolts. Just the thing to remove Rowe and Neverslip Calks. This
wrench will work in very close quarters.



MONKEY WRENCH **PIPE WRENCH**

HOW TO GET ONE

Send one three-year subscription (new or renewal) to Green's Fruit
Grower, with One Dollar to pay for same, and we will send you one of
these handy tools postpaid, without cost, to pay you for your interest.
Send now before it slips your mind.

Green's Fruit Grower Company, Rochester, N. Y.

Dairy and Creamery

Dairy Farming

Few farmers who have worn out farms
know anything about cow keeping, except
to supply the needs of the family. Dairy
farming is really the most advanced farm-
ing of which we have any knowledge, says
Farmer's Guide. It requires attention to
details, cleanliness, gentleness, skill in
selecting cows, and diligence in weeding
out the unworthy by means of the scales
and the Babcock test. It is, however, not
every farm that is so located that dairying
can be carried on to the best advantage.
There must be a market for the product,
whether that be milk, cream or butter, a
market that can be reached regularly and
without too much expenditure of time.
Where the farm is some distance from a

DAIRY NOTES

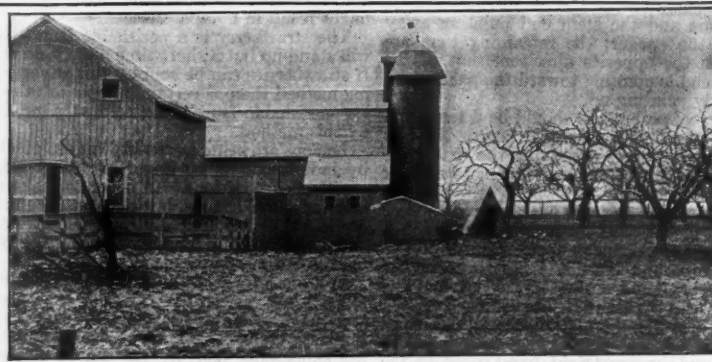
Do not destroy the flavor of the butter
by using too much salt.

Cooling the cream quickly is as important
as separating thoroughly.

Provide plenty of pure, fresh water, shade
and protection against flies during hot
weather.

If it is impossible to clean a vessel soon
after use, it should be kept filled with or
immersed in water.

Before calving, the cow's food should be
reduced in quantity and of a laxative nature.



Such barns as the above indicate fertile soil. I have noticed in traveling through the country that
you can judge of the fertility of farms somewhat by the size of the barns. The orchard at the right
also indicates fertile soil and good farm management. The farm that has not upon it an apple orchard
of from one to ten acres is an exception in western New York where this photograph was taken.

station, say from five to ten miles, beef
cattle are probably the best sort of live
stock to handle. This may be done either
by grazing or feeding, or both. Where a
man does not grow sufficient calves of his
own, which he will not unless he is engaged
in dairying, and unless he has a dual pur-
pose breed he cannot do so with very great
profit, then he must necessarily buy from
his neighbors or on the great markets.

There is only one time to churn, these
warm days, and that is early in the morning.

Don't let anyone move the cows faster
than a comfortable walk on the way to or
from the pasture.

The warmer the weather the more im-
portant it is to see to it that the milk vessels
are kept clean.

An acre of corn ensilage yields from 600
to 2000 pounds more nutrients per acre than
any other farm crop.

In the successful dairy, kindness to
animals, careful attention to cleanliness
and the comforts of the cows are sure to
be found.

If the heifer is to be reared with a view
of making her a dairy cow of greater value
than her mother, then she must be fed for
milk production.

Cows require a great deal of water and
as this may be obtained on most farms
without very heavy expense, the pasture
should be provided with an abundance of
good, fresh water.

Silos for the Fruit Grower

On account of the high price of fertilizer,
our attention is very properly drawn to
other possible means of keeping up the
fertility of our land. This is resulting in a
desire on the part of fruit growers to keep
more stock. They are handicapped, how-
ever, by a small acreage of open land and
the inability to grow a quantity of foods on
limited areas which will be sufficient to
make any general increase in the amount
of stock kept. One of the most efficient
factors to increase the efficiency of this open
land is the silo. Some of the most successful
fruit growers have erected silos and are
keeping stock merely through winter months.
This system works very well in that the
bulk of the work necessitated by keeping
more stock comes at a time when they are
not busy with their fruit.

EFFICIENCY OF SILOS. An average
yield of corn will make ten or twelve
tons of silage per acre. It takes a large-
sized animal weighing 1000 or 1300 pounds
to consume 40 pounds per day. Feeding

at the rate of 40 pounds per day, one ton
would feed one head 50 days. One acre
of fair corn or ten tons, would keep ten
head 50 days. Four acres would keep ten
head 200 days. These figures are theoretical.
Losses, due to careless feeding, to freezing
of silage, etc., might reduce this to a practi-
cal standard of four acres of good corn in
the form of silage feeding ten head for 150
days. Compare this efficiency with your
experience in feeding to your stock four
acres of good corn as cut stalks.—Niagara
Co. News Bureau.

Protection for the Milk Dealer

Milk dealers may now register milk cans,
bottles or jars in the office of the State De-
partment of Agriculture in Albany as a
protection against their appropriation and
use by other than the owner. Announce-
ment is made by Commissioner of Agricul-
ture Charles S. Wilson that he has arranged
in his office for carrying out the provisions
of a bill approved by Governor Whitman
which permits the registration of milk cans,
bottles and jars if the owner desires to
register them. Complaints have been made
that bottles, cans and jars belonging to
one dealer have been taken by another and
used in distributing milk. The new law is
designed to aid in preventing this.

Death of C. L. Watrous

C. L. Watrous, pioneer nurseryman and
fruit grower of Iowa, died at his home in
the City of Des Moines. The Evening
Tribune of that city says: "Captain C.
L. Watrous was an inspiring example of
the results that may be achieved by putting
one's principal energy into an avocation.
He was born in Freetown, New York, Jan-
uary 13, 1837, and was educated at Homer
(N. Y.) Academy. Early in the Civil War
he enlisted in the Union Army, was com-
missioned Captain and organized Company
"D" 76 N. Y. Volunteers; was severely
wounded in the second battle of Bull Run,
and retired from the service with honorable
discharge. Later, he studied law, and
graduated from Ann Arbor University.

Captain Watrous was a life member of the
Iowa State Horticultural Society, ex-pres-
ident of the American Pomological Society
and American Association of Nurserymen;
Past Commander of the Legion of Honor,
and a member of the G. A. R. He was a
member of the Iowa State Legislature in
the '80s, and was prominent in securing
the passage of temperance and pure food
laws. Recently he publicly endorsed the
cause of Woman's Suffrage.

For You

Written for Green's Fruit Grower by
FRANK MONROE BEVERLY

I'll gather flowers in the spring,
Both pink and violet,
With sprinkling of anemone,
And dash of mignonette.

And when I've gathered them I'll make
A lovely bouquet; yes,
A token of my good-will—but,
For whom you cannot guess.



Health, wealth and prosperity lie in the path
of the fruit grower, according to our artist's
view in the above cartoon. I will add the fact
that in order to be prosperous or healthy or
wealthy you must do something more than to
follow paths. You must make new paths and
keep wide awake and progressive.

Green's Fruit Grower

Some Experience with Strawberries

Written for Green's Fruit Grower by ANNA WADE GALLIGHER

It was back in 1906 that the writer first became interested in the growing of strawberries. At that time we were living on a rented place and we got no encouragement from the owner, who refused to pay for plants to set a patch, or even allow the price of same to be counted up in the rent. However, we decided to set a small patch of a hundred good plants, at our own expense, and have never had any cause to be sorry for doing so, in spite of the fact that we never picked any berries from that patch. The little place was sold that fall and, of course, we had to move. We had a fine lot of plants. A good many were given to the neighbors. However we decided to take up a hundred good plants, with plenty of soil around the roots, and move them to the place we had leased. Permit us to say, here, that where one is not prepared to buy land and can lease for a number of years, there is no risk in setting strawberry plants. If we had known then what we have since learned by experience, we would not have hesitated to plant an acre. Instead we set a hundred plants late in the fall (about the 11th day of November) which was too late. But they were only intended for home use and we did not expect to get much of a crop the next season and, needless to add, we didn't. But they did better than we expected.

The following season was very dry and the soil was rather thin, but in spite of all this and a heavy snow in May, we picked several gallons of berries. They were the nicest ever seen in that locality. However, we were not satisfied. After the little crop was gone, the patch was mowed off, as is usually the rule. This proved to be a mistake as the plants had not yet become very well established and to make matters worse, the latter part of the summer was so dry that very few young plants started until late in the fall. This, of course, gave a poor stand for the next season.

It did not seem worth while to do anything with the patch, at all, because the plants were so small and scattering. Those that had borne a crop of berries were nearly worthless, and some were destroyed to make room for the young plants. But it was a hopeless proposition. It was much worse than it would have been if the patch had not been mowed. This together with the drouth almost ruined the little patch for fair; but we were not willing to quit, so decided to mulch the entire surface of the patch with sheep manure. The previous fall it had been covered with dry weeds for lack of straw, with the result that we had a fine crop of weeds to contend with. The sheep manure while fresh, was very dry and thoroughly pulverized, so it was easily handled, it was spread on pretty thick so that no other covering was needed; but as the manure is not as strong as some kinds of fertilizer we thought it was safe enough. It proved to be the best mulch and one of the best fertilizers for strawberries that we ever have tried. We had a good crop of berries the following season. In the meantime, however, we had decided to set a larger patch and had ordered seven hundred plants to be set in the spring, which is the proper time to plant strawberries, in this part of the country. The varieties were the Wm. Belt, Excelsior, Climax and Brandywine. These are well-known varieties. But after giving them a thorough trial we have discarded all but the first-named. For quality the William Belt is hard to beat.

While gaining some experience we had plenty of strawberries for the home table and some to give away to a number of less fortunate neighbors, who by the way all owned their homes, yet were too careless to have a patch of strawberries. Some people claim that they can buy their berries cheaper than they can be grown at home. But, somehow, their tables are never very plentifully supplied, even in strawberry season, to say nothing of the rest of the year.

We sold some berries but were at that time, too far from a good market to make a business of growing berries for sale. Yet in that locality, as in many another, there was an excellent opportunity for someone who had the time, plus the ability, to overcome obstacles, to build up a profitable trade among the country folk, who, for one reason or another, failed to grow a supply of berries. At first, a little advertising is

sometimes necessary, but not always. That is, it is not always necessary to advertise your berries through a newspaper. There are various other methods that often prove more successful, and are less costly. When the fact that you have berries for sale, once becomes generally known the chances are you will have all the customers you want. They will come to your door.

We never made any special effort to advertise, but before long it became known that we had the finest strawberries, ever seen in that part of the country, and people began inquiring about the price of strawberries. Of course the supply soon became

is most effective if applied in hot, dry weather." The caustic soda may be purchased at nearly any drug store at about ten cents a pound. If applied during cool, damp weather, the soda will not be so effective.

A GOOD TIMELY SUGGESTION Help that Corn Crop

Farmers are facing an unusual situation with the corn crop this spring. The cold wet season has delayed fitting and planting the ground for a week to ten days throughout the corn-growing regions. Germination, too, has been retarded by the low temperature.

Perhaps, you have a field of yellow sickly-looking corn that simply refuses to grow. You can work wonders with that crop if you go about it in the right way. Top dress with from 200 to 300 pounds of

Throat-latches should always be quite loose,

A Good Collar Important

It is important that the collar fit perfectly. Sore or chafed necks are the outcome of collars which are too much bent at the top. Collars should not be too broad in the tree, especially if the horse is somewhat thin in flesh, and the ridge suffers unless a housing is worn. They generally fit better when placed well back and the girth does not get a chance to chafe the skin at the elbows.

The breastplates should not be allowed to dangle aimlessly about, as they have vitally important duties to perform in handling the load. Backbands should not be too tight, as when tight they are inductive to kicking. Tight girthing is never necessary. The breeching should hang in the right place and be just tight enough to come into play when the tugs or traces slack.

Remedy for Wood Chucks.

Close all holes that are connected but one. Saturate a wad of any old cloth the size of a fist with Carbon Birluphide, push into the remaining hole and close, and watch for stray visitors. Keep the chemical away from fire, even a lantern.—James Smith, Ohio.

The Northern Nut Growers Association will hold its seventh annual convention at Washington, D. C. on Friday and Saturday, September 8 and 9, in room 42-43 of the new building of the National Museum. Horticulturists, nurserymen and the general public are invited to attend. We hope people will arrange their trips so as to take in this meeting. Nut nurseries, collections and many remarkable nut trees are to be seen in and around Washington.

The association will offer the following prizes this year:

Butternut, \$5 first, \$3 second, \$2 third and five of \$1 each.

Blackwalnut, shagbark and shellbark hickories, northern pecans, hazels, Japanese walnuts and hybrid nuts, for each \$5 first, \$3 second, \$2 third. Total \$85.

In addition the following conditional prizes are offered:

For a hazel nut of pure American origin that can compete with the imported filbert, \$50.

For a shagbark hickory better than those now being propagated \$25.

For a northern pecan better than those now being propagated \$10. Total \$85.

W. C. Deming, Secretary
Georgetown, Connecticut

Here is Your Chance to Help Make Green's Fruit Grower the Kind of Magazine YOU Like

Answer the questions below and give us any suggestions you care to make. We will then do our best to give you the kind of articles etc., you like.

1. What department in Green's Fruit Grower do you like best?
2. What department in Green's Fruit Grower do you like least?
3. Would you like more stories? Short stories or continued?
4. Would you like more pictures?
5. Would you like a larger Poultry Department? Women's Department? Dairy Department?
6. Do you get help from the Questions and Answers Department? Would you enjoy more of them?
7. Would you like a department on How to Market Fruit, and giving market reports?
8. What new department would you suggest?
9. Please check the subjects in the following list that interest you and about which you would like to see articles in Green's Fruit Grower.

- Drains and How to Construct Them.
- Fertilizers for Fruits.
- Cultivation of Fruits.
- Packing and Grading Fruit.
- Poultry.
- Bees.
- Live Stock and Fruit Growing.
- Good Roads.
- Farm Machinery and its Care.
- Tractors and Trucks.
- Conveniences for the Home.
- Home Planting of Shrubs, etc.
- Commercial Orchard.
- 10. What other subjects would you suggest?

Through your help in this way we can make Green's Fruit Grower a magazine you will enjoy more and more each month. Thank you.

Sincerely yours,
Chas. A. Green, Editor.



Receiving and sorting the strawberries at a Rochester fruit farm. Strawberry growing is the poetry of fruit growing.

exhausted. We were not really trying to grow strawberries for sale.

We had been told that strawberries were not profitable, even when one lived close to the best local market, because it was claimed by some, who (it was learned on good authority, later) had never tried it, that homegrown berries could not compete, successfully, with shipped-in fruit. The only failure we ever made in selling strawberries, in market was when two neighbors hailed us (on the way to market) and bought all the berries we had with us.

Since we first began to grow strawberries for pleasure, we have had a good many ups and downs. We are no longer obliged to lease land. We are close to a good market and have had enough practical experience in growing strawberries to make a success of it. Or, at any rate, that is what we are trying to do.

Since early in 1914 we have planted nearly an acre to seven different varieties of strawberries. Part of these were destroyed by flood, but we had a fair crop last season. They brought from 10 to 15 cents a quart, while shipped-in berries would hardly sell at any price, which was certainly a rather convincing argument in favor of homegrown berries.

Experience is a good teacher.

Destroying Poison Ivy

Green's Fruit Grower:
Can you tell me what I can use to destroy the poison ivy plant?—
A. T. Waltman, Pa.

Reply: The best way we know of to kill the poison ivy plant is that given by Prof. L. H. Bailey in his "Farm & Garden Rule Book." "Poison ivy and similar woody-rooted pests can be eradicated by cutting off the tops in hot, dry weather in midsummer and pouring a saturated solution of caustic soda about the roots. Soil so treated will be rendered sterile for some time, but the soda will gradually leach away. Like salt, this

chemically prepared fertilizer—prepared plant food. Cultivate it in thoroughly at once. Cultivation will not only bring the plant food within reach of the young plants but will aerate the soil. And, the corn roots need air just as badly as they need plant food.

The pale leaves will soon become rank and green and will begin to expand and grow. Corn which is given a good "boost" at this time will mature quicker and be out of the way of the frost which is liable to catch backward corn this fall.

And, the time to act is NOW!

FITTING THE HARNESS PROPERLY Both Comfort and Good Service Result when this is Correctly done

Both for comfort and real good service there is a great deal in having properly fitting harness on work horses. It is quite a simple task to fit a harness properly, says Indiana Farmer. Any departure from a reasonably perfect fit should never be tolerated, for it is often a cause of accidents, besides a harness which is too tight or too loose lessens the working capacity of the horse.

Put the bridle on the horse and consider it critically. Is the brow-band of the proper length? Most browbands do not fit as they should, but are too loose and cause the sensitive ears to be painfully pinched. Blinkers, those abominations to the horse, are bad enough when in good condition, but carelessly kept they become warped and seriously obstruct the vision. If they flare, or the cheek pieces are too loose, they lose their effect in the one instance, and are dangerous as affording fleeting glimpses of following vehicles in the other. The check-rein should be most carefully adjusted. If the horse is compelled to hold his head too high he loses in power, but to have the check just right gives him a chance to rest his head and neck. Bits are often too wide rather than too narrow.



In the Good Old Summer Time

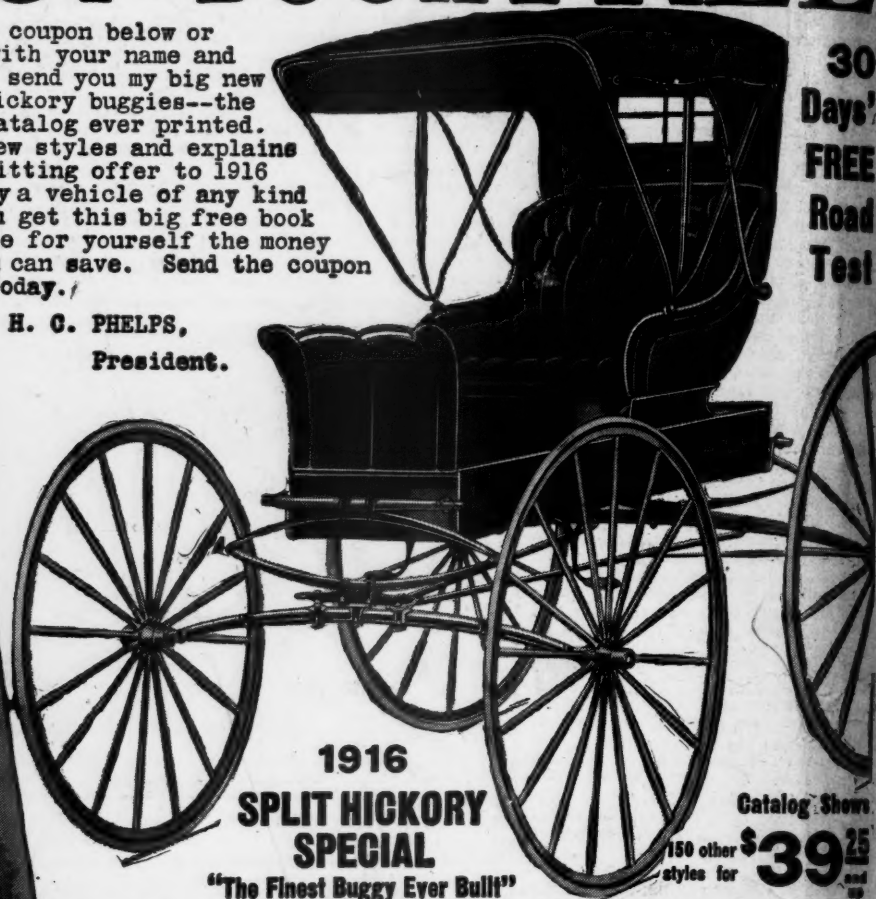
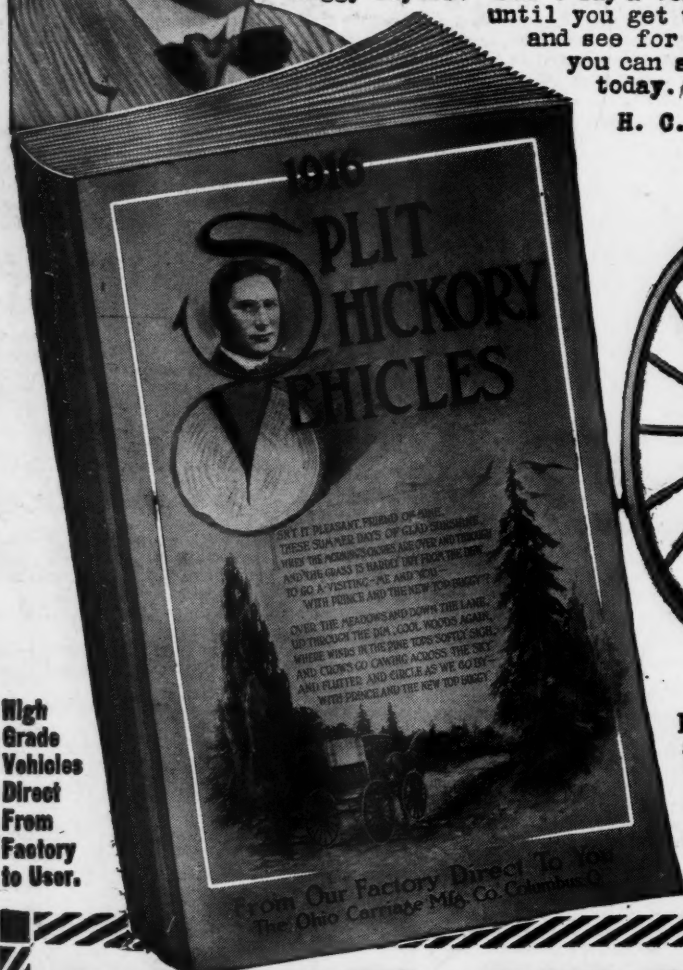


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Just mail me the coupon below or drop me a postal with your name and address and I will send you my big new catalog of Split Hickory buggies--the greatest Vehicle Catalog ever printed. Shows 150 handsome new styles and explains my special price-splitting offer to 1916 Buggy buyers. Don't buy a vehicle of any kind until you get this big free book and see for yourself the money you can save. Send the coupon today.

H. C. PHELPS,
President.

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Days'
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**SPLIT HICKORY
SPECIAL**
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High
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Here is the very newest, niftiest rig in the big Split Hickory line. As far ahead of ordinary rigs as the new model autos are ahead of last year's cars. Note the graceful body lines, handsomely trimmed auto seat, deep, comfortable upholstery in the beautiful mottled brown Spanish leather, and 16 coat lead and oil finish.

Has latest style Limousine Seat molded of sheet steel like auto--roomy, strong and comfortable--back will never split or spread at the corners. Never-leak automobile top. Wheels, shafts and reaches are all genuine, straight grained, second growth "Split Hickory." Reaches are steel clad full length. Padded patent leather dash and many other exclusive, high-grade features. You will find this rig fully described in my new catalog and offered at a price that will save you \$20 to \$40. Write for the free catalog today.

SPLIT HICKORY

I have built and sold almost a quarter of a million of these high-grade vehicles. They are famous everywhere for style, comfort and service. When I put the "Split Hickory" name plate on a buggy, I stake my reputation as the biggest exclusive factory-to-user buggy-maker in the world that the job is absolutely right from top to tires. I personally stand back of every rig with my guarantee of complete satisfaction. I promise you that when you get your Split Hickory Vehicle you will find it looks right, is made right, will wear right and that you will save \$20 to \$40 on the price by my new profit-splitting plan.

This year I am building more vehicles than ever (and cutting the price more than ever. I have made it possible for every man needing a new buggy to own and drive a genuine Split Hickory. The price no longer stands in your way. If you can afford any buggy made you can afford a Split Hickory. For example, my 1916 catalog shows 150 styles--some as low as only \$39.25 and up. Where else can you find such quality at such prices, and remember, I give

30 Days' Free Road Test -- 2 Years' Guarantee

You take no chances. I let you pick out the rig you want and drive it 30 days over your own roads--under your own conditions--before you decide. I prove the quality--I prove the value. You test the rig for comfort, light running, style and workmanship at my risk. Be sure to write for my big free 1916 Buggy Book before you buy. This coupon will bring it free--postpaid. Send today. See for yourself the money you can save.

H. C. Phelps, President

THE OHIO CARRIAGE MFG. CO.
STATION 40 COLUMBUS, OHIO (27)

Split Hickory Customers Write Like This:

A Clean Saving of \$40

H. C. Phelps, President
The Ohio Carriage Mfg. Co., Columbus, Ohio.
Dear Sir: I received my buggy on the 25th and everything was O. K. I am very well pleased with it in every way.
Judging from the appearance of the buggy, I could not have bought one equal to it for less than \$110.00 to \$125.00, which means a saving of \$40.00 to stay right in the user's pocket. I want to thank you for urging me to buy from you, for there is no comparison between your vehicles and others at anywhere near your price.
R. D. I GUY L. KEEFER, Union Bridge, Md.

The Finest Outfit in Town

The Ohio Carriage Mfg. Co., Columbus, Ohio.
Gentlemen: I have received my buggy and harness all O. K., and I am well pleased with it. It is the finest outfit in town.
Yours truly, A. B. WING, Apalachicola, Fla.

Used One Split Hickory 8 Years-- Buys Another

H. C. Phelps, President
The Ohio Carriage Mfg. Co., Columbus, Ohio.
Dear Sir: I received my buggy in excellent condition. I am well pleased with it. It came through in fine shape and is all I expected it to be. I am well pleased with the harness. I bought a buggy from you some six or eight years ago, and it has had very hard usage. It is in good shape today and will last a long time yet if properly cared for. I purchased this buggy for my son and daughter as well as for myself, and I am now in my 80th year, and my wife and I shall endeavor to take all the rides and pleasures we can with it.
I will do all I can in recommending your vehicles.
Yours truly, E. S. TRACY, Greene, Iowa

IMPORTANT

If you are interested in a new Farm Wagon or a new set of harness, be sure to ask for my Special Catalog of Split Hickory Farm Wagons and Ohio Brand Oak Tanned Harness. Both books are sent free and postpaid on request. They will save you money.
H. C. PHELPS, President

THE OHIO CARRIAGE MFG. CO.
Station 40
Please send me your 1916 Vehicle Catalog, also Farm Wagon Catalog and Harness Catalog (all 3 for \$1.00 if mailed to same address as above)
Name.....
P. O.
State.....
R.F.D.